

BRITAIN TO INDIA BY MOTOR-CAR.



THE OFFICIAL ORGAN OF THE B. B. C.

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EVERY FRIDAY.

Two Pence.

OFFICIAL PROGRAMMES

for the week commencing
SUNDAY, March 1st.

MAIN STATIONS.

LONDON, CARDIFF, ABERDEEN, GLASGOW, BIRMINGHAM, MANCHESTER, BOURNEMOUTH, NEWCASTLE, BELFAST

HIGH-POWER STATION.
(Chelmsford.)

RELAY STATIONS.

SHEFFIELD, PLYMOUTH, EDINBURGH, LIVERPOOL, LEEDS — BRADFORD, HULL, NOTTINGHAM, STOKE-ON-TRENT, DUNDEE, SWANSEA

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IMPORTANT TO READERS.

LETTERS FOR THE EDITOR should be addressed to "The Radio Times," 2-11, Southampton Street, Strand, W.C.2.

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The Marvels of Magnetism.

By Sir OLIVER LODGE.

[This week we publish the fourth of the seven lectures on "Ether and Reality" which Sir Oliver Lodge is broadcasting from London.]

ONE of the most important things that we know about electrons and protons is that they can never be either brought into existence or put out of existence: they can only be moved about from place to place—they are, in that respect, like any other form of matter. They can be transferred from one body to another; they can be accumulated so that one body has an excess, but some other body must have an equal defect. An extra number of electrons gives a negative charge to the body: anything with an excess of unbalanced protons is positively charged.

But it may be said, surely, when a thing is discharged (that is, when one body sparks into another, as when you connect the two coats of a Leyden jar), the two charges disappear! Yes, they "disappear": that is the right word. They are no longer apparent; but they have not gone out of existence. They have re-grouped themselves; the two opposite charges have got close together, they have, as it were, reunited; they are mutually satisfied; they make no more disturbance or strain, their lines of force have, as it were, shut up, or become exceedingly short. They have neutralized each other so far as outside effects are concerned; but they have not obliterated each other, their existence is not terminated: they are there ready to be separated again, or if not they, some others like them. The two oppositely charged bodies have become neutral.

We never really produce or destroy electricity. What one body has gained, another has lost, and when the balance is restored, there is equilibrium. We produce or display electric charge simply by transfer, simply by making manifest what was previously existent. We pull out infinitesimal lines of force and make them extend across perceptible space: we thus

in a way generate an electric field; but the field was pre-existent, though infinitesimal and non-apparent before we displayed it.

If we liken the lines of force to elastic threads, they are elastic threads of infinitesimal length, capable of being stretched *ad libitum*, without limit: the lines never snap, nor do they ever shrink up into absolute nothingness. To make this statement quite safe, we ought to say that they are not "known" to do such a thing in any of our experiments, however minutely we treat them. Whether they ever shrink to nothingness of their own accord, remains to be seen; such a discovery has not yet been made.

What we have now to learn is that something of the same sort is true of magnetism: we never really generate magnetism, any more than we generate electricity. We can make a magnet, just as we can charge a body; but the magnetism was there beforehand, just as the electricity was; we have only made manifest what was pre-existent.

So far, there is similarity, but now there are differences. We cannot charge a body with one sign of magnetism, say the north-seeking kind, leaving another body charged with the south-seeking kind. Every magnet has an equal quantity of both kinds, but instead of being close together, they can be separated by the whole length of a piece of steel.

That is an old-fashioned method of regarding magnetization, and has been known for centuries; but the inner meaning of it has not been so thoroughly known. There is a fundamental difference between electric and magnetic lines of force, a difference quite definite, though, perhaps, not easy to specify completely.

The main difference is this: an electric line of force has two ends, a positive end on a proton, a negative end on an electron. A magnetic

(Continued overleaf.)

The Marvels of Magnetism.

(Continued from the previous page.)

line of force has no ends, it is always a closed loop. We may not think of a magnetic line of force as analogous to an elastic thread joining two particles or pulling them together, it is more like an indiarubber ring; it is looped or closed on itself, it has no ends. But the loop is one that can be stretched, it can be expanded so as to enclose a big area, or it can shrink up until it is too small to be appreciable. It never shuts up to nothing; it never goes out of existence. If you call these loops magnetism, we never generate magnetism; we open it out.

The Earth as a Magnet.

An inert piece of iron is full of such infinitesimal loops; the act of magnetization opens them out and makes them perceptible. Part of them then lies in the air; but the air has nothing to do with them, they do not really exist in the air, they exist solely in the Ether. And the iron is not necessary either; it may have an extra number of the loops, and without iron or some similar substance, we might possibly not have discovered them, or not discovered them so soon; but they are there all the time, everywhere.

The Ether is full of them; and it so happens that in or near some large bodies, like the earth, some cause has already opened out a few of those loops; so that the earth behaves like a permanent magnet. What has magnetized the earth we do not completely know; but it was owing to that fact that the Ancients were enabled to discover magnetism. And some substances, even when dug out of the earth, have the power of retaining these loops in an opened-out condition: in other words, some ores of iron are natural magnets. They are not very strong—artificial magnets can be made much stronger—and as the cause of natural magnetism is not known, it is not the most instructive kind for serious contemplation.

Blindfold Methods.

It was long ago known, however, that the property of retaining the loops in an opened-out condition was possessed by steel, and many other substances in a greater or less degree; and there were rather blindfold methods also known by which one already magnetized body could excite magnetism in another. The natural idea would be that the magnetism of one was transferred to the other, and that what one body gained, the other lost. That is not so. It is so in electric charge; it is not so in magnetism. The magnetic influence or so-called "induction" is exercised without loss: one magnet can magnetize any number of others without itself being any the poorer; there is no limit to the amount of magnetization that can be produced, once it is started.

Magnetism and Life.

In this respect, it is rather like life. An oak can produce a large number of acorns, and each acorn has the potentiality of producing an oak; and so on without limit. Wherever life exists, it can increase prodigiously; not at the expense of the original source, but as if there were an infinite reservoir from which it could be drawn. The analogy is striking, but, perhaps, not helpful; for though we only know a little about magnetism, we know much less about life. We do not explain the unknown by the still more unknown, but we can draw attention to analogies and similarities, in spite of immense and important differences.

There is this further similarity, however, that production of more magnetism, or, more accurately, the display of pre-existent magnetism, is not accomplished without expenditure of something. It is not magnetism which is expended, but energy: energy must be ex-

pended, that is, work must be done, in order to produce more magnets; and if energy is not expended, nothing happens.

So it is with life. A plant can produce innumerable seeds, and thus give rise to innumerable plants, but not in the absence of energy, not without the rays of the sun. There must be available energy, and that is consumed in the process.

Forgetting the Sun.

We live in such a stream of energy coming from the sun that we almost forget its existence; it is essential to every movement, it is essential to the display of every form of life. Life may be there, in some imperceptible form, unknown to us; but without radiant or etherial energy, it could not enter into relation with matter, it could not grow and develop and become conspicuous.

What life is, we do not know; what magnetism is, we are only beginning to learn. But the two have this in common: they may be dormant, imperceptible, inactive; by means of energy they can be displayed, and displayed in unlimited amount. There is, as it were, an infinite amount available; or, if not infinite—that is, without limit—the limits are beyond anything that we have detected or imagined. We cannot say much about life (at least, I cannot), but I can say something more about magnetism, which is apparently a much simpler thing.

A Tremendous Discovery.

We not only have the power of passing it on by help of an ordinary magnetized body, which we pick up; we have the power of magnetizing a body *de novo*. We cannot generate the loops, it is true, but we can open them out, even if some already opened out were given us. We do not require a permanent magnet in order to magnetize bodies. What do we require? We require a moving electric charge; that is, we require to get an electron and a proton separated from each other and rush them along.

We generate magnetism by means of electricity. The two are remarkably inter-related; they are by no means the same thing. Electricity can generate magnetism, with the aid of energy expended. This was discovered by Arago early in the nineteenth century; and a few decades later, Faraday made the tremendous discovery that magnetism could generate electricity—also by the expenditure of energy. And now every dynamo is doing it.

The Link Between.

But these terms are not quite accurate. When I say that electricity can generate magnetism, I am speaking popularly. More accurately, an electric current can open out pre-existent magnetic loops and thus generate a perceptible magnetic field. And when I say that magnetism can generate electricity, I ought to say that a magnet enables energy to generate an electric current; that is, to set electrons in motion.

Motion, mechanical motion, is the link between the two things, electricity and magnetism. And it is by aid of mechanical motion (which is not an etherial process, pure and simple, but a material one) that electricity and magnetism in combination are able to interact with matter; and it is thus that they have come within our ken.

We realize electrical and magnetic phenomena by the motions which they are able to produce; we have sense organs for the purpose. Our physiological organism (in some mysterious way, to which we have grown so accustomed that we fail to realize the mystery) enables us to perceive mechanical motion: we can see pieces of matter moving. When we see the gold-leaves of an electroscope diverge, we know

that they are electrically charged. When we see a galvanometer deflect, we know that there is an electric current in its neighbourhood. When we see two pieces of iron or steel jump together, we know that they are magnetized.

We have a further most extraordinary sense. When we look at the flame of a fire or the filament of a lamp, or at the moon or a star or a landscape or, indeed, at any visible object, we know—at least, some of us have learnt to know—that there is an electromagnetic disturbance in the ether, travelling at a known pace, reaching our eye, and in some curious way stimulating the optic nerve. The sensations we experience directly; the meaning of these sensations, the causes which have excited them, the processes to which they are really due, are matters for inference, that is for scientific discovery.

Correcting Our Knowledge.

The senses give us the results, they do not tell us about the mechanism. It has been no easy matter to discover the mechanism, and there is much still to be discovered about it. Our explanations are bound to be dependent on the present state of scientific knowledge; we may be sure that posterity will know much more.

Meanwhile, we can try to learn what is already known: and in so far as our knowledge is inaccurate as well as incomplete, we must be always ready to correct it. We are certain that our knowledge will have to be enlarged; our hope is that it is accurate as far as it goes.

We live among difficulties, our life is bound by a struggle; but it may be a co-operative and not a competitive struggle.

An Unlimited Reservoir.

Knowledge in this respect is like life and magnetism: there is an unlimited reservoir from which to draw, and the imparting of knowledge does not lessen the amount possessed by the impartor; it is transferred without loss, though doubtless, with the expenditure of some energy. Knowledge grows from more to more. By diffusion it is increased: what one gains, another does not lose. Some energy and skill are needed for broadcasting; but it is an operation that can be conducted without loss: if the transmitter suffers at all, it is only his bodily energy which is consumed. A magnet which has excited other magnets may be even stronger than before. Life which has excited other life may still be vigorous. There may be temporary fatigue: a shrub may be temporarily exhausted by producing seeds, but it soon recovers. Fatigue is natural to material organisms and to any expenditure of energy; but recuperation follows, and next year it is ready for a fresh crop.

Learning From Facts.

Certainly, in the case of a physiological organism, fatigue may be pressed to excess: exhaustion, old age, and death lie in wait for bodily organisms: it is not they which are permanent. A magnet may be knocked into inefficiency by hammering; its loops shrink up into apparent nothingness, but they have not gone out of existence. A loose tile from a house-top may destroy the mechanism of thought, and damage irretrievably the working of an organism: thereby life and mind will disappear from our ken. But if the analogy holds, they have not gone out of existence. So far as we learn from science, nothing goes out of existence; it only changes its form, it may become inappreciable to our senses, it may to all appearance cease to be.

That is the Appearance. What is the Reality? That question must be answered by Science. In the case of magnetism and electricity it has been answered; in the case of life and mind it is in process of being answered—but, of course, not without controversy. Friendly discussion and controversy are to be welcomed. In this, as in all other matters, we must learn from the facts.

Making Listeners Jump!

By G. K. Chesterton.

[In last week's "Radio Times" Mr. G. K. Chesterton propounded some novel views on broadcasting in his own inimitable style. This week we publish the continuation of his article.]

WE all of us, in wandering about the world, come upon curious corners that contain very important matters. We often happen, so to speak, to hear small people saying very big things. Some utterly unknown man, of some humble and perhaps obscure trade, will have a point of view or a type of experience that we have never heard before, and that we believe the readers of the newspapers have never heard before.

He will sometimes need to be a man who practically never reads the newspapers himself; and there are many more such men than the writers and readers of newspapers probably imagine, especially among country people or men who have followed the sea.

A Question of Human Nature.

But the man may be entirely urban; he may be found in any of the grades of industrialism, and very probably in one of the little and less-known trades that depend upon or link up the great industrial operations. It will very probably be a trade that we never even heard the name of before. But it may be anything and it may turn up anywhere. The mark of it is that the angle of the argument or the point of the story is something that we find to be interesting and know to be new.

The grievance is not the ordinary Socialist grievance. The adventure is not the ordinary Imperialistic adventure. It is something that may possibly throw an entirely fresh light on some contemporary crisis or problems; but it is not the same as the contemporary criticism of them on either side. The thing I mean, like most valuable things, is at once indescribable and unmistakable. It is a question of human nature; and must be treated very tactfully in relation to much more important laws of human nature.

Manners Versus Radio.

Manners, not to mention morals, are a much more valuable discovery than wireless telegraphy. In a great many cases it will be much better to leave such a man in his social setting and merely add his experience to our own experience; in many cases it is probable that self-consciousness would entirely destroy the natural force. But I know of cases in which, after listening to such a man in a third-class carriage or a public-house, I should think I was acting as a very good citizen and a very fortunate servant of truth and justice if I said to that astonished individual: "Now you come and tell that to ten thousand people."

Not the Voice of England?

By experiments conceived in that spirit, I believe it might yet be possible to outflank or get past the rank of usual conventions that make so much of our journalism and politics both dull and deceptive; to get behind the facade of false reputation and fictitious generalities that represent the England we live in as something quite different from itself.

I do not mean what is commonly connoted by anything revolutionary; the revolutions also have become conventional. I mean that so long as the new science goes to the newspapers for its topics or to the Parliament for its names, the voice that speaks to the multitude will not be the voice of England or even the real voice of any Englishman; it will only tell the majority what the minority have already found to be false; and shout at the back-row of an audience of which the front-row is asleep.

Dancing Round the World.

The "Light Fantastic" in Other Lands.

NOWADAYS, everywhere like dancing, and all lovers of Terpsichore will be interested in the special programme to be given at Cardiff on Saturday, March 7th. Under the title "Dancing Round the World," it will comprise national dances of various countries, and will give a very good idea of their characteristics.

Although modern ballroom dancing has produced some weird and curious forms, the national dances of most nations have been preserved more or less in their original state and are still performed by the peasantry all over the world.

The love of the dance has existed from the remotest ages. It is natural for human beings of all races to jump when delighted or excited, and this primitive instinct led to the expression of the emotions by systematic means. This in time led to the invention of dances suitable to almost every occasion—such as weddings, wars, religious ceremonies, and even funerals. Among the ancient Greeks and Romans dancing was used as a means of physical culture.

Probably no country has so many graceful national dances as Spain. Many of them owe much to Moorish influence; but they differ considerably in the various provinces.

They Had to Join In.

One of the most popular is the Fandango. Well done, it is very pretty, and is accompanied by castanets and vigorous snapping of fingers. Suddenly there is a cessation of the music and the dancers stop dead in whatever positions they may happen to be at the time. When the music restarts, they bound again into full activity.

A writer of the seventeenth century tells a curious story about the Fandango. It reached the ears of high ecclesiastics that this dance was not altogether "proper," and a conclave of prelates assembled to discuss the matter. They were for condemning it on the spot, but one of them, more broad-minded than his colleagues, said that it was unfair to judge without having seen. Thereupon, a man and a woman were summoned and were asked to dance before the assembled dignitaries, and their graceful movements so delighted the prelates that the latter began to beat time with their hands. As the



Italian Peasants dancing the Tarantella.

dance proceeded, the ecclesiastics could contain themselves no longer and, one by one, they got up from their seats and joined the artists in the dance! After that, the Fandango was allowed to continue unchecked in Spain.

Other well-known Spanish dances are the Gibradina, the Alemana, the Zapateado, the Zorongo, the Jota, the Tuscana, the Bolero, and the Seguidilla. The latter are not only national dances, but popular stanzas with which the dances are accompanied. They are mentioned by Cervantes in "Don Quixote."

The Bolero is more graceful than the Fandango, and usually consists of five distinct parts. The Zorongo is a very quick dance, and the Tuscana has also been popular in the South of France since the Middle Ages.

To Give Their Husbands Courage.

Like the Spaniards, the Russians are great dancers. Their method of dancing in a seated position is well known, and requires a great deal of dexterity to accomplish.

In the East and among savage tribes national dances occupy a very important place. The women Negroes of the Gold Coast dance a war-dance while their husbands are away fighting in order to give them courage; and the Dervishes perform their famous whirling dance in order to become mediums and to obtain superhuman knowledge. Sweden possesses some very pretty national dances, and, indeed, the Swedes are great lovers of dancing of all kinds. Like the Greeks and Romans of old, they use the dance as a means of promoting health, and the well-

known Swedish Drill contains many movements that may legitimately be called dancing.

France, Norway, Denmark, Italy—all have their national dances. Especially popular in the latter country is the Tarantella, which is generally accompanied by the guitar or tambourine.

Rumour has it that this dance owes its name to tarantism, a kind of St. Vitus's Dance. It was found that music was especially beneficial to sufferers from this complaint, and a special dance was composed to soothe them. It is possible, however, that the dance really owes its name to Taranto, the town where it was especially favoured.

CHARLES TRISTRAM.



A Spanish Dance in the Open Air.

Official News and Views. GOSSIP ABOUT BROADCASTING.

The New Bill and the B.B.C.

THE new Wireless Bill has attracted a good deal of criticism. The B.B.C. had no share in its drafting, but naturally has an interest in an effort designed to regularise the conditions which make it possible to provide more and better services to listeners. The P.M.G. has pointed out that the "powers of search" are not an innovation. The sub-section of the new Bill which embodies these powers "is almost purely a consolidation of the existing provisions, and merely re-enacts with minor amendments Section 1, Sub-Section 4, of the Wireless Telegraph Act, 1904." It is pointed out, also, that the powers of search "have existed for twenty years, exist to-day, and continue to exist whether the new Bill becomes law or not."

Amendments Possible.

It is, of course, only right that legislation of this sort should be subjected to the closest scrutiny, and Parliament may be disposed to modify the provisions of the Bill in Committee. But the million and a quarter licensed listeners who loyally pay for the broadcast service will hope that, however the Bill may be changed during its passage through Parliament, it will, at least, in its final form, have the effect of putting a stop to intentional evasion. There is another point which listeners will appreciate. That is that if the B.B.C. is to develop its plans and to continue to improve its service, more money must be forthcoming. The present burden of three programmes for a penny does not appear excessive. It can be kept at this figure if all listeners take out licences. Elementary considerations of honesty should be as potent as legislative enactments. Anyway, public opinion has the last word.

A Musical Secret.

Admirers of the Savoy Bands will be interested to hear that the Savoy Orpheans, the Savoy Havana Band, and the Boston Orchestra are to give a third concert at the Queen's Hall, on Tuesday, March 10th. The fact that the Queen's Hall has already been filled twice by the attraction of syncopated music seems a sufficient reply to all those who said that syncopated music could have no place on the serious concert platform. The programme for the third concert will be almost entirely new, and it will also contain a surprise. This is a new symphony specially written by a serious musician, well known in London, and the son of a musician who was world famous. The name for the moment is being withheld, but it will be revealed after the concert.

Musical Comedy Programme.

A musical comedy programme at London on Saturday, March 14th, will include songs by Miss Grace Gooden and Mr. Frank Cochrane (the original singer of "The Cobbler's Song" in *Chu Chin Chow*), and syncopated songs by Mr. Cyril Ransom Newton and Mr. Billy Mayall. Mr. Newton is already familiar to listeners, who hear him singing the choruses of many of the numbers broadcast from the Savoy.

At 5.30 p.m. a "New Feature by Old Friends" will be broadcast. Listeners are asked to suggest a title after hearing it, and the sender of the best title received not later than first

post on Tuesday, March 17th, will be invited to attend the next feature performance in the London studio.

"Tannhäuser" at Cardiff.

Following the success of the production of *Lohengrin* at the Cardiff Station recently, it has been arranged to give a performance of *Tannhäuser* there on Wednesday, March 11th. The cast will include Mr. Harry Brindle, Mr. Joseph Farrington, Mr. William Heseltine, and Miss May Rlyth. The "SWA" Choir will be specially augmented for the performance, as will also be the Station Symphony Orchestra, conducted by Mr. Warwick Heathwaite.

"Trilby" to be Broadcast.

The programme at Plymouth on March 13th will introduce the "5PY" Repertory Company in *Trilby*, in which the leading parts of Trilby and Svengali will be played by Miss Gwen Verschoyle and Mr. Charles Freeman. These two artists have played these parts for years on the professional stage. They will also perform an excerpt from *The School for Scandal*.

Miss Gladys Ball, contralto, and Mr. Frederick Allen, baritone, and Miss Dorothy Blagden, soprano, will contribute to the programme.

A Young Folks' Night.

Since the opening of the Nottingham Station a considerable amount of local talent has been discovered. Particular interest attaches to the Young Folks' Night which is planned to be broadcast from this station on Friday, March 13th, as the ages of the artists range from eleven to eighteen years.

The Next International Symphony Concert.

The fourth of the International Symphony Concerts will be relayed from the Royal Opera House, Covent Garden, on Thursday, March 12th. The first performance in England of Edgar Stollman Kelley's musical miracle play, *The Pilgrim's Progress*, will be given. This programme will be S.B.

For West Country Listeners.

The Colston Hall concert by the Bristol Symphony Orchestra is to be broadcast from the Cardiff Station on Wednesday, March 4th. The Bristol Symphony Orchestra is formed of the best local talent, for this concert it will be conducted by Mr. Eugene Goossens. Since its inception, the orchestra has adopted the policy of engaging the finest possible conductors, amongst whom in recent years have been Mr. Albert Coates and Mr. Landon Ronald.

Ballads Old and New.

An S.B. programme of "Ballads Old and New," for Tuesday, March 10th, contains orchestral selections of songs by favourite composers such as Tosti, Wilfrid Sanderson, and W. H. Squire, and two special selections, one of old-time ballads and another of old music-hall songs, both arranged by Mr. Robert Chignell. Part songs by the Salisbury Singers, a favourite wireless male voice quartet, will be included in this programme, and songs by Miss Kate Winter (soprano), Miss Nellie Walker (contralto), and Mr. Leonard Salisbury (bass), who is the founder of the Salisbury Singers.

Do You Keep Bees?

Mr. H. Boyd Martin, Chairman of the East of Scotland Bee-Keepers' Association, will give a series of five talks during March from the Dundee Station. He will speak on "Bee-Keeping as a Hobby and for Profit"; "Occupants of a Hive and their Functions"; "Bee Swarming and How it May be Retarded"; "Working for Honey and Preparation for Winter Quarters." The first talk will be given on March 2nd, at 6.40 p.m.

Talks on Human Nature.

Mr. Neil Wright, M.A., will deliver, at the Nottingham Station on Wednesday, March 11th, the first of a series of Talks on Human Nature. This will be followed by a telephone-wireless discussion. Two further talks and discussions by Mr. Neil Wright have been arranged for this month, and the series will deal with "Human Nature," "Love and Hate," and "What is Character?"

Complete Church Service by Radio.

A complete evening church service will be relayed from St. Cathbert's Parish Church, Edinburgh, on Sunday, March 8th, from 6.30 to 8.0 p.m. The preacher will be the Rev. Wilfrid L. Bannam, B.D., of the Wesleyan Methodist Church. From 6.15 to 6.30 p.m. the bells of St. Cathbert's will be broadcast.

"A Night in Holland."

Glasgow Station, continuing its series of programmes of different countries, has arranged a "Night in Holland" for Monday, March 9th. The music will be from the works of Dutch composers, and Mr. Herbert Tatlock, with his dramatic company, will present a play called *Frans Hals*. It has been specially written for broadcasting by the author.

A Song Cycle Dramatized.

At the Cardiff Station on Friday, March 13th, "The Fair Maid of the Mill," the famous song cycle by Schubert, will be performed by Mr. John Collinson and Miss Ina Jameson, with interludes by the Station Orchestra.



Operatic Artist: "Yes, laddie, take it from me; this broadcasting of opera will never affect box-office receipts. Merely hearing us sing doesn't satisfy the public. They like to see the artists, laddie—like to see us in the flesh!"

PEOPLE YOU WILL HEAR NEXT WEEK.



Lord HIDDLELL, who will take on "Popularity and Prosperity" from London on March 4th. (This talk will be S.B. to all Stations.)

An Interesting Discovery.

THE search for actors who can impart sufficient personality and characterization to their voices to render them effective in Radio drama has been long, but has produced some interesting discoveries. Among these must be mentioned Raymond Trafford, who will take the part of Shylock in the programme of popular excerpts from Shakespeare, at Chelmsford on March 3rd. This programme will give listeners an opportunity of

introduction to the head of the Amsterdam Conservatoire of Music. It resulted in five years' tuition there. At seventeen he was soloist and leader of the Amsterdam Opera House Orchestra. This was followed by a European tour as a violinist. For twenty-five years he has lived and played in this country, and during seventeen of these he has played at the Piccadilly Hotel.

A Dutchman by birth, De Groot has been for many years a naturalized Englishman, and possesses a charm which makes his personality always popular. His Sunday evening concerts are widely appreciated, and where once he



MISS BEATRICE MIRANDA.



Miss MAVIS BENNETT, soprano, will sing at Bournemouth on March 1st, and at London on March 4th.



Mr. RAYMOND TRAFFORD as "Shylock."



Miss IRENE SCHARRER, the famous pianist, who will broadcast from Newcastle on March 4th and Aberdeen on March 5th.



Mr. JOSEPH FARRINGTON, bass, will sing from London on March 4th.



Mr. EUGENE GOOSSENS, who will conduct the Bristol Symphony Orchestra on March 4th from Cardiff.



Mr. DE GROOT and his violin.

hearing some really first-class elocution.

Mr. Trafford has had considerable experience both as

an actor and manager, and he is widely known. For radio purposes, however, he has decided to veil his identity under the above name *de theatre*. He is one of the few who have succeeded in selecting and emphasizing those details of stage-craft which can be effectively transmitted to a wireless audience.

Orchestra Leader at Seventeen.

SO interested was the great Joachim with the playing of the boy De Groot that he sent him with a letter of in-

received ten letters daily. Since his concerts were broadcast his postbag is now swollen to nearly twenty times its former

size. He and his orchestra will be broadcast from the Piccadilly Hotel on Sunday, March 1st.

"Faust" by Radio.

THE Carl Rosa Opera Company would probably agree that during the years Miss Beatrice Miranda was with them they had no more popular or conscientious artist. She was soprano of the British National Opera Company until last summer, and is now a favourite broadcasting singer. She will take the part of Marguerite in the performance of Gounod's *Faust*, to be relayed from the Birmingham Town Hall on March 7th.



Mr. JOHN NIELD as "Romeo." He will perform this part at Chelmsford on March 3rd.

Pieces in the Programmes.

A Weekly Feature Conducted by Percy A. Scholes.

STRAUSS' PIANO QUARTET.

(LONDON, BIRMINGHAM, Bournemouth, Cardiff, and all Relay Stations, except DUNDEE, THURSDAY.)

MOST concert-goers have got beyond the stage of being puzzled by Strauss, and, in any case, this Quartet is not going to puzzle anyone who hears it on Thursday—provided they listen attentively, for it is one of its composer's early works and is now over forty years old. In this way it is not typical Strauss. It is Strauss trying his wings, and not soaring far above the familiar "classical" styles of Beethoven and Brahms—especially Brahms.

Here is a quotation from an English criticism of 1904—that of Arthur Johnstone, then the music critic of the *Manchester Guardian*. Strauss, he says, "here shows himself a better Beethoven than Brahms, avoiding all his model's worst faults."

There are four separate pieces making up the whole—or, as we say, four "Movements." The four instruments used are, of course, Piano, Violin, Viola and Cello.

I.

Quick.—The FIRST MOVEMENT is cast in the orthodox "First Movement" form, in which certain Main Tunes are announced in an "Exposition," developed in a "Development Section" and repeated in a "Recapitulation." Strauss was even so orthodox as to indicate the old-fashioned repetition of the Exposition before proceeding to the development—a practice which is nowadays considered unnecessary in most cases. Hence some players of this piece ignore the "repeat."

The FIRST MAIN TUNE is announced softly by STRINGS in octaves. It is a brief phrase. There is a pause at its end, then it is loudly repeated by the Cello and the bass of the Piano, while Violin and Viola put above it more florid melody. After two loud chords, over a repeated bass is heard a little wave-like phrase in Piano and Lower Strings: this may be noted, as it is next in importance to the two Main Tunes.

Some considerable time is taken over the discussion of these and other fragments of Tunes. The SECOND MAIN TUNE takes long to come, but when it does come, it is impossible to miss it. It is a big, broad, highly impetuous, long-winded melody, declaimed by ALL STRINGS while the pianist sweeps up and down the keys.

The Development (followed duly by the Recapitulation) begins as soon as this is over.

II. SCHERZO.

This title has become a technical term, and partly lost its original meaning—a "jest."

The form of this one is orthodox. There are three main divisions, the Third Part being a repetition of the First. This First Part is constituted as follows:—

(a) The First Section, which here contains as chief features a little octave skip, a fragment of flowing tune, and another fragment of melody composed of little upward steps. The section is repeated.

(b) A Second Section, much longer than (a), in which these fragments are tossed from one instrument to another, and finally repeated much as before.

The Second Part is *Much Slower*, and is entirely made out of a short, smooth phrase. One note persists in the Bass throughout.

The First Part, in its repetition, proceeds as before until, towards the end, the Tune of the Second Part joins in.

III.

Moving steadily. This Movement is similar in form to the First Movement, but much more

lyrical. It is built up on two song-like Tunes, each of which is stated by the Piano. The second one is preceded by a little figure of rapid descent reiterated by the Strings in turn.

IV.

Lively. The material of the Last Movement is very complex, and an attempt to follow it in detail, without a copy of the music, would probably result in missing its spirit.

It is in "Rondo" form, that is, the material used at the beginning always returns before a fresh start is made.

Note.—A Miniature Score of this work is published in the Universal Edition (Curwen, 24, Berners Street, W.1, 3s.).

Most Popular Song.

Which Is It?

WE recently published an article by Mr. A. B. Cooper, entitled "Which is the Most Popular Song?" and asked listeners to send us their opinions. Our contributor voted for "Home, Sweet Home," "Annie Laurie," and "Auld Lang Syne," with a preference for the latter, and many of the numerous letters we have received agree with this verdict.

A number of correspondents, however, favour lesser-known songs.

"I think you would have to go a good long way," writes Mr. Matthew Roach (Grimsby), "to find a song that can rival 'Oft in the Silent Night' for its beautiful melody and pathos."

Mr. William Wilson (S. Chingford) gives equal place to two songs. "If the terms 'best beloved,' 'oftenest heard,' 'most widely known' are taken as being indicative of popularity," he says, "it will be difficult to displace 'Sally in Our Alley' and 'The British Grenadier.' Both are music, poetic and English. By reason of their music and poesy, they are also classical."

In Favour of Sullivan.

Mr. R. Gregory (Derbyshire) thinks that "we may be susceptible to different songs according to the frame of mind in which they find us, but a song that will stir our emotions, irrespective of the mood, is the most popular," and for this reason he puts "Home, Sweet Home" above all others.

Among other songs which readers have chosen as being the most popular are "Auld Robin Gray," "Come to the Fair," Tosti's "Parted," "Annie Laurie," "Come Into the Garden, Maid," and "Just a Song at Twilight," but more favoured than all these is Sullivan's "The Lost Chord."

"I have the experience of playing to theatres full of people," writes Mr. Thomas Sharples, "with a reasonable response to other vocal items, but with 'The Lost Chord,' the applause has superseded all others by two hundred per cent."

To sum up, our post-bag shows the most popular songs among our readers to be "Auld Lang Syne," "Home, Sweet Home," and "The Lost Chord."

STANFORD'S "Star of the East" and Vaughan Williams' "Mystical Songs" will be the chief items of the programme to be relayed by the Leeds-Bradford Station, from the St. George's Hall, Bradford, on Friday, March 13th. This concert will be given by the Bradford Festival Choral Society, and the principal artists will include Mr. Raymond Hartley and Mr. Harold Williams.

Listeners' Letters.

ALL letters to the Editor to be acknowledged must give the name and address of the sender. Anonymous communications are not considered.

"The Religion That Is Broadcast."

DEAR SIR.—Will you allow me, as a priest (in the Church of England), and a schoolmaster, to express my cordial approbation of the policy set forth in the official announcement in *The Radio Times*? I am constantly voicing, in public and in semi-public, my appreciation of the work of the B.B.C., but I cannot thank you well enough.

Here and there, no doubt, a churchgoer is led, by inertia, to substitute a broadcast service for attendance at Divine worship; but a hundred times as great is the number of listeners who are induced by broadcast "religious addresses" to give unwonted attention to the things that matter the most; while the B.B.C. is helping churchgoers to realize how much they hold in common with their fellow worshippers of other denominations. The B.B.C. is teaching members of the various churches to understand one another better, and one another's ideals, and is thereby doing something to dispel ignorance and prejudice, and to incite charity.

It cannot reasonably be expected that the B.B.C. should broadcast any "adequate" system of theology. That is part of the work of the Churches. But broadcasting is certainly strengthening the foundations on which theology, as well as religion, is built.

Yours, etc.,

A. W. LAYLAND.

Ilford.

Wireless For the Blind.

DEAR SIR.—With reference to the interesting article in *The Radio Times* on "Wireless for the Blind," by Captain Ian Fraser, I heartily agree with all that he says of the inestimable boon of wireless to the Blind, and letters from our readers in all parts of the country testify to the added interest that the B.B.C. has given to their lives.

But Captain Fraser's remark that it is exceptional for a man who has lost his sight in adult life to become a proficient finger reader, is apt to be misleading, and in this connection it may be of interest to state that in the twelve months ending December 31st, 1924, the National Library for the Blind has issued 6,753 volumes in Braille type to ex-Servicemen.

Yours, etc.,

O. J. POINTE.

(Secretary and Librarian, National Library for the Blind.)

Westminster, S.W.1.

"Lecturing the Uncles."

DEAR SIR.—Referring to Mr. Littlewood's article, "Lecturing the Uncles," in *The Radio Times*, it is not altogether surprising that his children do not thoroughly appreciate the Children's Hour, as he himself seems to have been born at the age of forty or thereabouts. I am a "niece" of fifteen, and can, perhaps, understand what we girls and boys like better than a father who appears to have forgotten his own feelings at that age.

It seems rather ridiculous of him to attempt criticism of the Aunts and Uncles of "H.O.," whom one would think were born specially to make children happy, so perfectly do they understand what we will enjoy. They have not forgotten their own childhood.

There are not too many fairy stories, and to say that they are told in "a patronizing tone" is untrue, the most lovable characteristic of the Aunts and Uncles being their total lack of such a tone.

Yours, etc.,

"A NIECE OF FIFTEEN."

West Norwood.

(Continued on the facing page.)

Listeners' Letters.

(Continued from the previous page.)

Too Much Modern Music?

DEAR SIR.—The excellent programmes of the B.B.C. are occasionally marred by the productions of our Moderns in music and verse.

Some time ago a symphony by one of these Moderns was broadcast, and 25 drums (or, perhaps, 50 drums) were introduced.

This was shortly afterwards followed by a "Symphonic Poem," chiefly devoted to the Triangle. I did not hear it all, as a linerick was forming itself in my mind—something like this—

For sensation our Modern will angle,
And invent scores for Drum or Triangle.
Why not write a Sonata,
Missa, Fugue, or Cantata.

For Tooth-cumb, Frot-saw, and a Mangle?

Then there is the modern poet who not only writes poems, but is allowed to recite them. I have heard bad poems well recited, and good poems badly recited; but when one gets the combination of a modern poet reciting his own poems, I think it is time to draw the line.

All honour to the work the B.B.C. is doing in educating the public in music, literature, science, religion, and art. It is a magnificent task that they have set themselves, and in the main it is most ably carried out. But please, oh, please, let them spare us Modern Music and Poetry that is intended to be taken seriously, unless they have first decided that it has some merit.

Yours, etc.,

Totley Rise, Nr. Sheffield. H. J. B.

[It is realized that to certain listeners modern music is anathema. On the other hand, however, there are many who not only enjoy this type of matter, but who like to hear it, whether they themselves are appreciative or not. As regards modern poetry, it is the policy of the B.B.C. to keep their listeners in touch with all literary, artistic, and intellectual movements which may be of interest to the general public.]

Curious Interference.

DEAR SIR.—Some of your readers often complain of interference with listening. I wonder if anyone has the same complaint that we have here?

There is in this road a man who has an electrical apparatus for treatment of rheumatism, and when he is using the same, it makes such a rattling noise on the headphones that we are bound to put them down, as it drowns all that is being spoken or played at "2L.O." Everyone within a radius of three hundred yards gets it the same.

Yours, etc.,

"STRATFORD."

[In certain cases, electrical apparatus used for medical purposes can seriously interfere with broadcasting, as in the case cited by this correspondent. It is probable that a great deal of the trouble can be minimized by enclosing the stray wires used in connection with the apparatus in metallic cases. Ideally, the whole instrument should be encased in a metal covering, when all interference should be eliminated.]

Big Ben Heard in Egypt.

DEAR SIR.—Since October last year, I have been able to pick up Chelmsford on my experimental set containing four valves H.F. and two L.F.

I am living at Minia, 180 miles south of Cairo, with a desert on either side, save for a narrow strip of cultivation. This means that there is about 360 miles of desert, as the crow flies, between Minia and the Mediterranean. Naturally, therefore, there is a great deal of atmospheric disturbance during the hot weather.

I receive Chelmsford now almost daily, picking up the time signals from Big Ben, and most of the musical items, though speech is sometimes indistinct owing to atmospheric.

Yours, etc.,

Minia, Upper Egypt. R. W. C.

"Pray Silence, Please!"

Memories of a Well-Known Toastmaster.

IF there is one man who, above most others, is competent to express an opinion on present-day oratory and public speaking, that man, I suggest, is Mr. William Knightsmith, the best-known toastmaster and master of ceremonies, whose resonant, finely-modulated voice is often heard by listeners on the occasion of great banquets and similar functions.

There can be very few listeners who by now have not heard Mr. Knightsmith announcing the familiar formula of "Your excellencies, my lords, ladies, and gentlemen," and who have failed to notice the expectant hush that follows.

Children as Orators.

"In my thirty years' experience," said Mr. Knightsmith, when I called on him a few days ago, "I have listened to some thousands of speeches, made by the King and members of the Royal Family, Prime Ministers, ambassadors, distinguished foreign visitors, down to ordinary human beings like myself—yes, and children. I have officiated at many children's functions, and I am not quite sure that, on the whole, I do not enjoy them better than those for grown-ups. My responsibilities are not quite so onerous, you see."

"But, you ask me: Do I think that broadcasting will help to improve public speaking? My answer is that I certainly think it will; in fact, I have already noticed an improvement in some instances. Of course, the change for the better is as yet only very slight, and, possibly, it is not noticeable, except to anyone who, like me, knows the methods and mannerisms of the speakers I have in mind; but, still, it does exist. Speakers, I have observed, tend to take rather more trouble than some of them usually do in preparing speeches that are to be broadcast, while others pay more attention to their delivery, as if they desire it to be more than ordinarily effective.

In Unexpected Places.

"The standard of public speaking to-day, I think, is higher than it was when I began my professional career. In those days there were, perhaps, more outstanding orators in public life; but nowadays you may hear good speeches made by men—yes, and women—from whom one would hardly expect them. Broadcasting, I feel sure, will assist in raising this standard, although on the part of some speakers I have noticed a curious hesitancy when they discover that their voices are going to be heard by millions instead of by two or three hundred people. But this quite natural reticence will, no doubt, wear off in time, and I think that we may look forward to a day when, through the medium of the microphone, everyone will have a chance of hearing for himself what good oratory really means."

A Trick that Failed.

I asked Mr. Knightsmith whether he thinks that speeches are likely to grow in length as a result of broadcasting. His reply was—shall I say?—reassuring.

"I am beginning to think that the day of the long speech is over," he said. "Speakers are mastering the art of being concise. Not so often nowadays does it become necessary for me to intimate to a speaker, as tactfully as I can, that time is up. It is not always easy, of course, to do this, and occasionally I have to make conspicuous play with my watch before a speaker realises that he is exceeding his allotted span."

"By the way, I remember that once this little trick of mine led to a speaker prolonging his speech, instead of cutting it short. The gentleman in question had overshot the mark by nearly five minutes, and I, therefore, took out my watch and held it so that, when turning in my direction,



"You have given me the best laugh I have had for months, toastmaster!"

he could not fail to see it. Unfortunately, the moment he set eyes on the watch, it reminded him of a story about a watchmaker—and off he went again! Those who noticed the incident found it hard to conceal their mirth, and one noble lord facetiously suggested after the dinner that next time I had better equip myself with an alarm clock!

Celebrities with Mannerisms.

"And talking of speakers," Mr. Knightsmith continued, "I am reminded of some of our best-known speakers' quaint little mannerisms which always fascinate me. Mr. Lloyd George, for instance, invariably finishes a speech by repeating the last sentence two or three times, and then murmuring under his breath: 'There—that is all, I think; that is all.' The ex-American Ambassador, Mr. Harvey, is hardly happy when speaking unless he can refresh his lips every minute or so with mineral water. Mr. Hughes, the Australian ex-Prime Minister, will not begin a speech unless he has pushed plate, knife, forks, spoon, and glasses, and whatever else may be immediately before him on the table, well out of his reach."

Why Lloyd George Laughed.

Appropos of Mr. Lloyd George, Mr. Knightsmith tells a good story. He was officiating at a dinner given to General Botha at the Hotel Cecil. Now, the General liked to make his speeches in Dutch, and to have them interpreted by an interpreter. It was at the time of the women's suffrage campaign, and feeling was rife on the subject all over the country.

During this particular dinner, a man sympathizer got up and began to address the company, but Mr. Knightsmith managed to eject him unceremoniously before he had got very far. As soon as General Botha got up to speak, another man sprang to his feet and began to talk. Mr. Knightsmith was behind him in a moment, and, placing his hands on his shoulders, earnestly tried to keep him quiet. There was a moment's pause, and then a terrific peal of laughter from the guests. The man so abruptly silenced was the official interpreter!

Mr. Lloyd George, who was in the chair, turned to Mr. Knightsmith and said: "You have given me the best laugh I have had for months, toastmaster!"

R.P.

WIRELESS PROGRAMME—SUNDAY (March 1st.)

The letters "S.B." printed in italics in these programmes signify a simultaneous broadcast from the station mentioned.

2LO LONDON. 365 M.

3.0-5.0. St. David's Day Programmes.

S.B. to other Stations.
A Contingent of 25 voices from

THE LONDON WELSH MALE CHOIR.

Conductor: HORATIO DAVIES.

GWADYS NASH (Soprano).

MAUD DAVIES (Baritone).

R. PURCELL JONES (Solo Violoncello).

The Choir.

"Rhyfelgyrch Gwy'r Harlech" ("March of the Men of Harlech")

arr. for T.T.B.B.

"Feasting I Watch" (Unaccompanied)

Chor (11)

"The Viking Song" (Coleridge-Taylor (2)

Gwladys Nash.

"Heaven" (T. Osborne Roberts)

"Wood Patria" (Hubert Wilfred Jones)

"Nant y Mynydd" ("The Mountain Stream") (William Davies)

R. Purcell Jones.

"Welsh Rhapsody" (R. Purcell Jones)

Maud Davies.

"Silent Noon" (B. Vaughan Williams)

"Vagabond" (B. Vaughan Williams (1)

"Whither Must I Wander" (B. Vaughan Williams (1)

H. Walford Davies

"I Love the Joins'd Dance" (The Choir)

"O mor ber yn y man" ("In the Sweet Bye-and Bye") (D. Protheroe)

"O Peaceful Night" (B. German (11)

"Nidaro" (D. Protheroe)

Gwladys Nash.

"If I Had But Two Little Wings" (Harp)

"To Buffaloe" (Orchestra)

"The Nightingale" (First Performance)

"The Lover's Leap" (R. S. Hughes)

R. Purcell Jones.

"Two Welsh Idylls" (R. Purcell Jones)

Maud Davies.

"Rhyfelgyrch Cadfan Morgann" ("Captain Morgan's March") (arr. A. Samerell (1)

"Robin Ddlig" ("Lazy Robin") (arr. W. Hubert Davies)

arr. W. Hubert Davies

"Bugail yr Hafod" ("When I was a Shepherd") (arr. A. Samerell (1)

"With fynd o Ddyl Dywyn" ("With David to Towy") (arr. W. Hubert Davies)

The Choir.

"Teyrnedd Caruol" ("Lovely Maiden") (D. Pughe Evans)

"Down Among the Dead Men" (Old English Air) (arr. R. Vaughan Williams (15)

"Y Delyn Aur" ("The Golden Harp") (arr. D. Pughe Evans)

Sullivan (11)

"The Long Day Closes" (Unaccompanied)

5.0-5.30. CHILDREN'S CORNER. S.B. to all Stations.

8.15-9.0.

ARCH DRUID.

Conducted by the

ARCH DRUID.

Relayed from the Welsh Tabernacle,

King's Cross, London.

S.B. to other Stations.

DE GROOT

and

THE PICCADILLY ORCHESTRA.

WYNNE AJELLO (Soprano).

Relayed from

The Piccadilly Hotel, London.

S.B. to other Stations.

The Orchestra.

Selection, "Carmen" (M. L. 243)

Wynne Ajello.
"Mae'r Ddraig Amlwg" ("The Dragon is Seen")
Composers: ("The Sicilian Vespers") Verdi

The Orchestra.

"Classico" (Finch)

"Charming Bird" (David)

The Orchestra.

Chopiniana (by request) (arr. Finch)

10.0. TIME SIGNAL FROM GREENWICH.

WEATHER FORECAST and

GENERAL NEWS BULLETIN. S.B. to all Stations.

Local News.

10.15. The Orchestra.

"Hymne à Sainte-Cécile" (Lionel)

10.30.—Close down.

SIT BIRMINGHAM. 475 M.

3.0-5.0. Mainly Light Classics.

THE STATION ORCHESTRA.

EMILY BROUGHTON (Soprano).

ALICE VAUGHAN (Contralto).

ALICE COUCHMAN (Solo Pianoforte).

The Orchestra.

Overture, "The Impresario" (Mozart)

"Evening" (Gounod (1)

Emily Broughton.

"Rose Softly Blooming" (Spake)

"My Mother Bids Me Bend My Hair" (Hagdo)

"Lo, Here the Gentle Lark" (Bishop)

(With Piano Obligato by W. HERD.)

Alice Couchman.

Enapsoody in G Minor, Op. 70... Brahms

Scherzo from Sonatas, Op. 35... Chopin

Polonaise in E... Liszt

Alice Vaughan.

"June Roses" (Francesca Rubaltini)

"San Ean Awa" (The Orchestra)

Symphony No. 4, Op. 90, in A ("The Italian") (Mendelssohn)

Allegro Vivace, "Pilgrims' March" (Moderato con Moto, Balletello)

Emily Broughton.

"The Song of the Palanquin Bearer" (Martin Shaw (2)

"A Blackbird Singing" (Michael Head)

"Listening" (M. Boddy (2)

Alice Couchman.

"Butterflies" (Schedatchee)

"In the Garden" (Babakire)

Polonaise in D (Mozart)

The Orchestra.

Characteristic Piece, "Grasshopper's Dance" (Boccherini)

"Miniature Suite" (Chamade)

Italian Air; Russian Air; Spain.

5.0-5.30. CHILDREN'S CORNER. S.B. from London.

8.15-9.0. WELSH SERVICE. S.B. from London.

9.0. DE GROOT AND THE PICCADILLY ORCHESTRA. S.B. from London.

10.0. WEATHER FORECAST and NEWS. S.B. from London.

Local News.

10.15. De Groot and the Piccadilly Orchestra (Continued).

10.30.—Close down.

6BM BOURNEMOUTH. 385 M.

3.0-5.0. ST. DAVID'S DAY PROGRAMME. S.B. from London.

5.0-5.30. CHILDREN'S CORNER. S.B. from London.

8.15-9.0. WELSH SERVICE. S.B. from London.

THE J. H. SQUIRE CELESTE OCTET.

DAVID OPENSHAW (Bass).

MAVIS BENNETT (Soprano).

DAVID DAVIES' WELSH MALE VOICE PARTY.

9.0. Octet.

Overture, Introduction and Rondo Capriccioso (Mendelssohn)

"A Song of Sleep" (Debussy)

"Absent" (Maurice (1)

"Soleil de Ballet" (De Bériot)

9.30. David Openshaw.

"Thanks Be To God" (Debussy (2)

"Speak, Earth, Speak" (Debussy)

9.25. Octet.

Selection of Arthur Sullivan's Songs (arr. Benby (1)

9.40. Male Voice Party.

"Hea Wlad by Nodden" (arr. arr. Dick (25)

"The Little Church" (Baker (12)

9.50. Octet.

Violin ("On Wings of Song" (Mendelssohn)

Solo ("Les Hous des Laines" (Bach)

(Soloist, MAYER GORDON.)

10.0. WEATHER FORECAST and NEWS. S.B. from London.

Local News.

10.15. Octet.

"Society" (Grieg)

"March of the Dwarfs" (Grieg)

10.20. Mavis Bennett.

"Since the Day" ("Depuis le Jour") (Chapman)

"Solweig's Song" (Grieg)

10.25. Male Voice Party.

"Martyrs of the Arena" (De Bille (2)

"The Galien Lyre" (De Bille (25)

"Owen Rhonda" (Hughes)

10.35. Mavis Bennett.

"I Know That My Redeemer Liveth" ("The Messiah") (Handel)

10.40. Octet (Strings only).

"God Is a Spirit" (Sigrudde Bennett (11)

"Abide With Me" (Liddle (1)

10.50. David Openshaw.

"Nearer, My God, To Thee."

"The Wayfarer's Night Song" (Eashop Martin (5)

10.55. Octet.

"Grande Valse" (Waldteufel)

11.0.—Close down.

5WA CARDIFF. 351 M.

3.0-5.0. ST. DAVID'S DAY PROGRAMME. S.B. from London.

5.0-5.30. CHILDREN'S CORNER. S.B. from London.

8.15-9.0. WELSH SERVICE. S.B. from London.

9.0. DE GROOT and THE PICCADILLY ORCHESTRA. S.B. from London.

10.0. WEATHER FORECAST and NEWS. S.B. from London.

Local News.

10.15. De Groot and the Piccadilly Orchestra (Continued).

10.30.—"The Silent Fellowship."

10.45.—Close down.

2ZY MANCHESTER. 375 M.

3.0-5.0. A Welsh Programme.

LENA GRIFFITHS (Contralto).

H. MOSTYN PUGH (Tenor).

THE "2ZY" AUGMENTED ORCHESTRA.

Conductor, T. H. MORRISON.

Orchestra.

Overture, "The Harpers of Wales" (Carl Fuhl)

Selection, "Cumbria" (Dunlop)

Selection, "Cumbria" (Dunlop)

Selection, "Cumbria" (Dunlop)

Selection, "Cumbria" (Dunlop)

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Selection, "Cumbria" (Dunlop)

Selection, "Cumbria" (Dunlop)

WIRELESS PROGRAMME--SUNDAY (Mar. 1st.)

The letters "S.B." printed in italics in these programmes signify a Simultaneous Broadcast from the station mentioned.

H. Montyn Pugh.
 "Yr Hân Gendler" *D. Pugh Jones*
 "Gwlad y Delys" *John Henry*
 "Cariac" *W. T. Evans*
Orchestra.
 "Welsh Rhapsody" *Gwynn*
Lena Griffiths
 "Y Bethyn Bach To Gweli" *Fangham Williams*
 "Dyfudd Y Gwraig Wen" *arr. Arthur Samerwell*
Orchestra.
 "Fantasia on Welsh Airs" ("The Look") *Myddelton*
 "Cymeru Charn" *Thos Jones*
H. Montyn Pugh.
 "At Through the Night" *Traditional*
 "The Ash Grove" *Traditional*
 "The Dimpled Cheek" *Traditional*
Orchestra.
 "Erythraic Overture" *Hopkin Evans*
 "Reminiscences of Wales" *arr. P. Godfrey*
Lena Griffiths
 "My Little Welsh Home" *Gwynn Williams*
 "Moors of the Valley" *David Evans*
Orchestra.
 "God Bless the Prince of Wales"
 Welsh National Anthem.

5.0-5.30.—CHILDREN'S CORNER. *S.B. from London.*

8.0.—S. G. HONEY: Talk to Young People.
 8.25.—English Hymnal, No. 211, St. David's Day Hymn.

Religious Address by The Rev. R. T. ROBERTS, of Wrexham Welsh Presbyterian Church.

English Hymnal, No. 168, "Who is This with Garments of Glory?"

English Hymnal, No. 87, "Say, When in Dust to Thee."

9.0.—DE GROOT and THE PICCADILLY ORCHESTRA. *S.B. from London.*

10.0.—WEATHER FORECAST and NEWS. *S.B. from London. Local News.*

10.15.—De Groot and The Piccadilly Orchestra (Continued).

10.30.—Close down.

SNO NEWCASTLE. 400 M.

5.0-5.0.—ST. DAVID'S DAY PROGRAMME. *S.B. from London.*

5.0-5.30.—CHILDREN'S CORNER. *S.B. from London.*

8.15-9.0.—WELSH SERVICE. *S.B. from London.*

9.0.—PHILHARMONIC CONCERT. Relayed from The Palace Theatre.

9.30-10.30.—Programme *S.B. from London.*

2BD ABERDEEN. 495 M.

5.0-5.0.—ST. DAVID'S DAY PROGRAMME. *S.B. from London.*

5.0-5.30.—CHILDREN'S CORNER. *S.B. from London.*

6.30.—St. Fittick's Parish Church Choir. Choirmaster—R. G. TAYLOR.

Psalm 124, Tune "Old 124th."

Hymn No. 253.

The Rev. JOHN GORDON, M.A., St. Fittick's Parish Church. Religious Address.

Anthem, "The Lord is My Shepherd" *Smay*

(Soloist—EVELYN WALKER.)

Para. 60, Tune "Lyra."

0.0. WILLAN SWAINSON'S "SERVICE" CHOIR.

Conductor—WILLAN SWAINSON.
 Motet, "Jesu, Priceless Treasure" Bach (11)
 Choral, "Jesu, Priceless Treasure."
 "So There is Now no Condemnation."
 Choral, "In Thine Arm I Rest Me."
 Trio, "Thus, Then, the Law of the Spirit."
 "Death, I Do Not Fear Thee."
 "Ye Are Not of the Flesh But of the Spirit."
 Choral, "Hence with Earthly Treasures."
 "Face Thee Well."
 "He That Raised Christ Up From the Dead."
 "Hence All Fears and Sadness."

0.25.—THE WIRELESS TRIO.

Selected Hymns.

0.35.—Chorus.

Two Psalms *Holst*

0.45.—Trio.

Selected Hymns.

10.0.—WEATHER FORECAST and NEWS. *S.B. from London. Local News.*

10.15.—DE GROOT and THE PICCADILLY ORCHESTRA. *S.B. from London.*

10.30.—Close down.

SSC GLASGOW. 400 M.

5.0-5.0.—ST. DAVID'S DAY PROGRAMME. *S.B. from London.*

5.0-5.30.—CHILDREN'S CORNER. *S.B. from London.*

0.30-7.45.—Religious Service, relayed from the Barony Parish Church.

9.0.—DE GROOT and THE PICCADILLY ORCHESTRA. *S.B. from London.*

10.0.—WEATHER FORECAST and NEWS. *S.B. from London. Local News.*

10.15.—De Groot and The Piccadilly Orchestra (Continued).

10.30.—Close down.

A number against a musical item indicates the name of its publisher. A key list of publishers will be found on page 442.

High-Power Programme.

(Continued from column 3.)

9.30.—WEATHER FORECAST and NEWS. *S.B. from London.*

Sir OLIVER LODGE. *S.B. from London.*

10.0-11.0.—THE SAVOY BANDS. *S.B. from London.*

WEDNESDAY, March 4th.

5.30-6.15.—CHILDREN'S CORNER. *S.B. from London.*

6.40-10.30.—Programme *S.B. from London.*

THURSDAY, March 5th.

5.30-6.15.—CHILDREN'S CORNER. *S.B. from London.*

6.40-7.30.—Programme *S.B. from London.*

7.30-8.50.—Entertainment by PHILIP RITTE'S CONCERT PARTY:

DORIS COWAN.

ETHEL WILFORD.

TINA FOSTER.

PHILIP RITTE.

GEORGE DUFFY.

WILL EDWARDS.

8.50-9.50.—Programme *S.B. from Manchester.*

9.50 (approx.)—WEATHER FORECAST and NEWS. Relayed from London.

10.0-11.0.—THE SAVOY BANDS. *S.B. from London.*

FRIDAY, March 6th.

5.30-6.15.—CHILDREN'S CORNER. *S.B. from London.*

6.40-10.30.—Programme *S.B. from London.*

SATURDAY, March 7th.

5.30-6.15.—CHILDREN'S CORNER. *S.B. from London.*

6.40-7.30.—Programme *S.B. from London.*

7.30-8.50.—BALLAD CONCERT, *S.B. from Glasgow.*

8.50-10.0.—Programme *S.B. from London.*

10.0-12.0.—THE SAVOY BANDS. *S.B. from London.*

High-Power Station Programme.

SXX. 1600 M.

SUNDAY, March 1st.

5.0-5.0.—Programme *S.B. from London.*

5.0-5.30.—CHILDREN'S CORNER. *S.B. from London.*

8.30.—Hymn, A and M, No. 261.

Religious Address by Monsignor N. P. BROW, Auxiliary Bishop of Southwark.

Hymn, A and M, No. 528.

9.0-10.30.—Programme *S.B. from London.*

MONDAY, March 2nd.

5.30-6.15.—CHILDREN'S CORNER. *S.B. from London.*

6.40-9.0.—Programme *S.B. from London.*

9.0-9.30.—Speeches by the Rt. Hon. Sir W. JOYNSON HICKS, House Secretary, and Mr. PENEY BEST, Chairman and President Elect, relayed from the I.A.R.D. Dinner at the Savoy Hotel.

9.30-10.30.—Programme *S.B. from London.*

TUESDAY, March 3rd.

5.30-6.15.—CHILDREN'S CORNER. *S.B. from London.*

6.40-7.30.—Programme *S.B. from London.*

Popular Excerpts from Shakespeare. Produced by R. E. JEFFREY.

Incidental Music by THE SNOW STRING QUARTET: (JESSIE SNOW, KENNETH SKEATING, ERNEST TOMLINSON, EDWARD J. ROBINSON.)

Shakespearean Songs sung by DALE SMITH (Baritone).

7.30.—The Quartet. Movements from Quartet in A Minor Schubert.

Andante—Minuetto.

7.45.—"ROMEO AND JULIET" (Balcony Scene.) Act II, Scene 2.

Roman JOHN GIELGUD

Juliet DOROTHIE PANTLING

Nurse IRENE ROOKE

8.0.—Dale Smith.

Old Settings of Shakespearean Lyrics.

"When Daisies Pied" *Arne (2)*

"Under the Greenwood Tree" *Born (2)*

"Cranberry and Youth" *Born (2)*

"When That I Was But a Little Boy" *Arne*

"It Was a Lover and His Lass" *Arne*

8.15.—"THE MERCHANT OF VENICE" (Loss and Trial Scenes.) Act I, Scene 3.

Shylock RAYMOND TRAFFORD

Antonio HENRY OSCAR

Act IV, Scene 1.

Duke GEORGE SKILLAN

Antonio FRANK RANDELL

Shylock RAYMOND TRAFFORD

Antonio HENRY OSCAR

Nurse DOROTHIE PANTLING

Portia DOUGLAS ROSS

8.47.—The Quartet. "The Londonderry Air" *arr. Frank Bridge*

Dale Smith.

Three Shakespearean Songs *Quiller (1)*

"Come Away, Death"; "O Mistress Mine"; "Blow, Blow, Thine Winter Wind."

9.10.—"KING HENRY V." (Wooding Scene.) Act V, Scene 2.

Henry V. GEORGE SKILLAN

Queen Katherine DOROTHIE PANTLING

9.20.—The Quartet.

Novelton *Glasgow*

"In an Old Fashioned Style"; "Orchestra."

(Continued in the previous column.)

WIRELESS PROGRAMME—MONDAY (March 2nd.)

The letters "S.B." printed in italics in these programmes signify a Simultaneous Broadcast from the station mentioned.

2LO LONDON. 365 M.

2.15-3.45.—Transmission to Schools: Mr. GEOFFREY SLAW on "Music."

4.0-5.0.—Time Signal from Greenwich. "Vogues and Vanities," by Carmen of Colquhoun. Music performed during Afternoon Tea at the Trocadero. "Famous Old Castles—(1) Amboise in Touraine," by Helen Townsme.

5.30-6.15.—CHILDREN'S CORNER: "And make I Have Met—The Moose," told by Capt. R. G. Marshfield. Music by Auntie Sophie.

6.10-6.55.—Mr. LOUIS J. McQUILLAND: "A Glance of Ireland."

7.0.—TIME SIGNAL FROM BIG BEN. WEATHER FORECAST and 1ST GENERAL NEWS BULLETIN. S.B. to all Stations.

Talk by the Radio Association. S.B. to all Stations.

Prof. J. E. G. DE MONTMORENCY: "Mercantile Law." S.B. to all Stations. Local News.

Popular Night.

LEA FELISSA (Soprano).

FRED ARNOLD (Baritone).

W. A. PETERKIN (Bass).

OLLY OAKLEY (Solo Banjo).

FRANK TULLY (Entertainer).

THE WIRELESS ORCHESTRA.

Conducted by DAN GODFREY, Junr.

7.35. The Orchestra.
March, "The Peacemaker"..... *Latter*
Overture, "The Maid of Artois".... *Balfie*
Lea Felissa.

"Spring"..... *G. Henschel* (1)

"The Nightingale Has a Lyre of Gold"
..... *London Herald* (5)

Olly Oakley in

Items from his Repertoire.

W. A. Peterkin (with Orchestra).

"Vulcan's Song" ("Philemon and Baucis")
..... *Gershwins*

"Thou'rt Passing Hence"..... *Sullivan*

8.0. (approx.). The Orchestra.

Waltz, "The Blue Danube"..... *Strawss*

Selection, "The Belle of New York"
..... *Kerker*

Intermezzo, "Moravian Dance"..... *Jenckens*

8.30. (approx.). Fred Arnold (with Orchestra).

"Honolulu"..... *Upholsten*

"Golden West" (Valse)..... *Nicholls*

"Am I to Blame?"..... *Pariani*

The Orchestra.

Suite, "Three Arabian Dances"..... *Ring*

Lea Felissa.

"Song of the Open"..... *Frank la Forge*

"Daffodils in London Town"
..... *Montague Phillips*

9.0 (approx.). Olly Oakley in

Further Items from his Repertoire.

W. A. Peterkin (with Orchestra).

"Sambor Woods"..... *Tully* (1)

"Myself When Young"..... *Lehmann*

The Orchestra.

Intermezzo, "The Coster's Wooing"
..... *Blamner*

"Spring Song" and "The Bee's Wedding"
..... *Mendelssohn*

9.15.—TIME SIGNAL FROM GREENWICH.

WEATHER FORECAST and 2ND

GENERAL NEWS BULLETIN. S.B.

to all Stations.

Mr. CLAUD MULLINS, Barrister at Law,

on "London's Government." S.B. to

other Stations.

Local News.

10.0. The Orchestra.

Selection, "Primrose"..... *Gershwin*

Frank Tully.

In an Impersonation of the Famous

American Humorist, Walter G. Kelly,

as "The Virginian Judge."

The Orchestra.

Chinese March, "Kwang-Hai"..... *Lauke*

11.30.—Close down.

The Experimental Transmission for Amateur Wireless Engineers will be carried out by the Glasgow Station, 10.30-11.0.

For particulars see page 456.

5IT BIRMINGHAM. 475 M.

3.30-4.30.—The Station Wind Quintet. Albert Townsend (Bass).

5.0-5.30.—WOMEN'S CORNER: Sidney Rogers, F.R.H.S., Topical Horticultural Hints. Florence Cleston (Soprano).

5.30-6.30.—CHILDREN'S CORNER.

6.30-6.45.—Teens' Corner: Norman E. L. Guest, B.A., History Talk, No. 9, "Manufacture and Commerce."

7.0.—WEATHER FORECAST and NEWS.

S.B. from London.

Radio Association Talk. S.B. from London.

Prof. J. E. G. DE MONTMORENCY.

S.B. from London. Local News.

Music and Plays.

THE BARNABDO MUSICAL BOYS.

THE STATION COMPANY OF PLAYERS.

7.35.—Handbells, "Illo-A-Ilo"..... *Cocle*

Sleigh Bells, "The Green Hills of Tyrol"
..... *Boswell*

Minstrel Chimes, "Gems of Erin"
..... *arr. Fletcher*

Mandolines, "Jessamine Polka"..... *Ellis*

Xylophones and Tubophones, "The Gordon
March"..... *Ellis*

Bagpipes, "The Highland Wedding"
..... *Scotch Airs*

Ocarinas, "If Winter Comes"..... *Tennant*

Marimbaphones, "Autumn Leaves"
..... *Delacour*

Handbells, "Land of Hope and Glory"
..... *Elgar* (1)

8.30.—"CHIEUK MATE"

(Audrey Halliday).

A Farce in Two Acts.

Henry (Written at the Plantagenet Hotel)

FRANK V. FENN

Miss Charlotte Rume

EDNA GODFREY-TURNER

Martha Bunn (Her Maid)

HILDA POWIS

Sir Eveston Toffee, E. STUART VINDEN

Sara Winkle (His Groom)

WILLIAM MACREADY

Bottles, f (Sara) GEORGE ROBERTS

Mary Ann (vocal) f EDNA LESTER

Act I.—The coffee room in a Country

Hotel.

Act II.—The garden at "The Grange."

9.30.—WEATHER FORECAST and NEWS.

S.B. from London.

Topical Talk. Local News.

10.0. "SALLY SELLS OUT"

(J. E. Huthoth).

A Play in One Act.

Sir Andrew Halliday

WILLIAM MACREADY

Folsom (His Servant) FRANK V. FENN

Sally (A Flower Girl)

EDNA GODFREY-TURNER

Scene—Sir Andrew's Chambers, Midway

Square, London.

10.30.—Close down.

6BM BOURNEMOUTH. 385 M.

3.45-5.0.—Fashion Talk to Women by Louis de

Moya. The ROYAL BATH HOTEL.

DANCE ORCHESTRA. Reginald Boyan

(Baritone).

5.0-6.0.—CHILDREN'S CORNER.

6.0-6.30.—Schubert's Half Hour: "Dad Dad-

dy," by Mr. George Guest, B.A., J.P.

6.35-7.15.—Bulletin of the Radio Society of

Bournemouth and District. Talk by

Major J. Crompton, M.B.E., T.D.

7.0.—WEATHER FORECAST and NEWS.

S.B. from London.

Radio Association Talk. S.B. from London.

Prof. J. E. G. DE MONTMORENCY.

S.B. from London. Local News.

England, Ireland, Scotland and Wales.

HUBERT CARTER (Tenor).

NORMA FLEMING (Dialect Tales).

WYNNE AJELLO (Soprano).

THE "6BM" CHORUS:

THE WIRELESS ORCHESTRA

Conducted by

Capt. W. A. FEATHERSTONE.

ENGLAND.

Orchestra.

7.35. Fantasia, "The Rose"..... *Myddleton*

Hubert Carter, Wynne Ajello, and Chorus.

"Coco, Lasses and Lads"..... *Traditional*

"Tom Bowling"..... *Traditional*

"We All Love a Pretty Girl"..... *Bishop*

"Bid Me Discourse"..... *Traditional*

"Rule Britannia"..... *Traditional*

7.55. Norma Fleming.

"The Cattle Thief."

IRELAND.

Orchestra.

8.0. Fantasia, "The Shamrock"..... *Myddleton*

Hubert Carter, Wynne Ajello, and Chorus.

"The Harp That Once Thro'

Tara's Halls"..... *Traditional*

"The Last Rose of Summer"..... *Traditional*

"The Cradle Song"..... *Traditional*

"The Irish Emigrant"..... *Traditional*

"The Minstrel Boy"..... *Traditional*

8.25. Norma Fleming.

"McGinty."

"In Service"..... *Winifred Lewis*

SCOTLAND.

Orchestra.

8.30. Fantasia, "The Thistle"..... *Myddleton*

Hubert Carter, Wynne Ajello, and Chorus.

"Come Under My Plaidie"..... *Traditional*

"Will Ye No Come Back

Again?"..... *Traditional*

"Annie Laurie"..... *Traditional*

"Hunting Tower"..... *Traditional*

"The Lord o' Cockpen"..... *Traditional*

8.55. Norma Fleming.

"Sworders McGlashan's Courtship"

David Kennedy

"Me and Him."

WALES.

9.0. Hubert Carter, Wynne Ajello and Chorus.

"Loudly Proclaim"

"All Through the Night"..... *Traditional*

"Saint David's Day"..... *Traditional*

"David of the White Rock"..... *Traditional*

"The Men of Harlech"..... *Traditional*

9.15. Orchestra.

"Remembrance of Wales"..... *F. Godfrey*

9.30.—WEATHER FORECAST and NEWS.

S.B. from London.

Mr. CLAUD MULLINS, S.B. from London.

Local News.

10.0. Half-an-Hour with the Orchestra.

Three Dances, "Bonny Vill."..... *Gorman* (11)

Patrol, "The B'hoys of Tipperary"..... *Amers*

Overture, "Plymouth Hoe"..... *Amers*

Patrol, "The Wee Macgregor"..... *Amers*

10.30.—Close down.

5WA CARDIFF. 351 M.

3.0-4.0.—Falkman and his Orchestra, relayed

from the Capitol Cinema.

4.45-5.15.—"5WA'S" "FIVE O'CLOCKS."

5.15-6.0.—CHILDREN'S CORNER.

6.40-6.55.—Dr. J. J. Simpson, M.A., D.Sc.,

"Romances of Natural History."

7.0.—WEATHER FORECAST and NEWS.

S.B. from London.

Radio Association Talk. S.B. from London.

Prof. J. E. G. DE MONTMORENCY. S.B.

from London. Local News.

NORA DELMARR (Soprano).

THE STATION ORCHESTRA:

Conductor,

WARWICK BRAITHWAITE.

Orchestra.

7.35. Selection, "The Grand Duchess"..... *Offenbach*

7.45. Nora Delmarr.

"Love's Old Sweet Song"..... *Molloy* (1)

"By the Waters of Minnetonka"..... *Laurance*

"If I Were a Lark"..... *Clutenn*

A number against a musical item indicates the name

of its publisher. A key list of publishers will be found on

page 147.

WIRELESS PROGRAMME—TUESDAY (March 3rd.)

The letters "S.B." printed in italics in these programmes signify a simultaneous broadcast from the station mentioned.

ZLO LONDON. 365 M.

1020.—Time Signal from Greenwich. Music by the Royal Albert Hall Orchestra.

3.30.—Transmission to Schools. "The Country Side—The Map of England," by Patricia Johnson.

4.05.0.—"Books to Read," by Ann Spicer. Organ and Orchestral Music, relayed from Shepherd's Bush Pavilion. "Historical Pictures—(B), Some Women of the Restoration," by Anna Cunningham.

5.06.0.—CHILDREN'S CORNER. Joseph Slater (Forte Solo). "A Naure Story," by Joan Kennedy. "Progress through the Ages—(2) Housing," by W. J. Chas. on.

6.06.55.—An Appeal on behalf of the Elizabeth Garrett Anderson Hospital Extension Appeal Fund, by Miss LILIAN FAITHWAITE.

7.0.—TIME SIGNAL FROM HQ. REV. WEATHER FORECAST and 1ST GENERAL NEWS BULLETIN, S.B. to all Stations.

JOHN STRACHBY, Literary Criticism, S.B. to all Stations.

Local News.

7.30. All Stations Programme. (For particulars see centre column.)

8.0.—TIME SIGNAL FROM HQ. REV. WEATHER FORECAST and 1ST GENERAL NEWS BULLETIN, S.B. to all Stations.

8.0.—OLIVER LOUGE, F.R.S., "Euler and Reality—Electromagnetism," relayed from the Royal Albert Hall, London, S.B. to all Stations.

Local News.

10.0.—All Stations Programme (Continued).

10.30. THE SAVOY ORPHEANS AND SAVOY HAVANA BAND relayed from the Savoy Hotel, London, S.B. to all Stations.

11.0.—Close down.

5IT BIRMINGHAM. 475 M.

10.0.—Lombard Picture House Orchestra.

4.04.30.—Song. "The City of Birmingham," by ALFRED BAYES (of the Birmingham and Midland Institute). "English Literature."

5.15.30. WOMEN'S CORNER. Barbara Wainwright, Natural History Talk, "How It's Done," Wm. Fred Morris (Contralto).

6.30-6.30.—CHILDREN'S CORNER.

6.30-6.45.—"Teens' Corner. Winifred Morris (Contralto).

7.0-11.0.—Programme S.B. from London.

6BM BOURNEMOUTH. 385 M.

1.45-5.0.—Travel Talk to Women: "A Trip to Uman (China)," by Major Cooper Hunt. The Wireless Orchestra: Conducted by Capt. W. A. Featherstone.

5.0-6.0.—CHILDREN'S CORNER.

ALL STATIONS PROGRAMME (except 5XX). Relayed from London.

VIVIENNE CHATTERTON
STUART ROBERTSON
ANDREW SHANKS
THE WIRELESS ORCHESTRA
Conducted by
L. STANTON JEFFERIES.

7.30-8.30.

"The Sea."

"THE WATERMAN"
A Ballet Opera by Charles Dibdin.
(First produced in 1774 at the Theatre Royal, Haymarket.)

Cast
Tom Tug (A Waterman) STUART ROBERTSON
Rubra (His Rival) ANDREW SHANKS
Bundie (A Gardener) CHARLES WRETFORD
Mrs. Bundie (His Wife) HELENA MILLAIS
Wilhelmina (Their Daughter) VIVIENNE CHATTERTON
Produced and Conducted by
L. STANTON JEFFERIES

8.25. A Brief Interlude
"From My Window," by Philomena.

The Orchestra.
Overture, "Britannia" Mackenzie (15)
"Sea Shoon" Andrew Shanks Eric Fogg
"Songs of the Sea" Stanford (1)
"Drake's Drum"
"Outward Bound"
"Devon, O Devon, in Wind and Rain."
"Homeward Bound"
"The Old Soperh"
The Orchestra.
"Sea Foam" (Suite, "The Sea")
"Moonlight" Frank Bridge (14)
Sea Chanties arranged by Geoffrey Toye (1)
"So west, Stuart Robertson"
"Amsterdam" "Missouri" "The Liverpool Girls."

10.0-10.30.

"The Country."

The Orchestra.
"Cipsy Suite" Edward Garmas (11)
Vivienne Chatterton.
"The City Child" Stanford
"A Green Cornfield" Michael Head (1)
"Spring" Henschel (1)
The Orchestra.
Ballet Music ("Sylvan Scenes") Percy Fletcher

6.0-6.30.—Schools' Half Hour. Art and Religion, by Cecil Rhodes.

6.30-6.45.—Farmers' Talk. The Management of Grassland Sheep, by John Fawcett.

7.0-11.0.—Programme S.B. from London.

CHAPPELL

and

pianos are in use at the
various stations of the
B.B.C.

5WA CARDIFF. 351 M.

3.30-5.0.—Transmission to School. Music by the Cardiff How Music Hall.

3.30-4.0.—The Station Trio.

4.0-4.45.—The Carlton Orchestra, relayed from the Carlton Restaurant.

4.45-5.15.—"5WA'S" "FIVE O' CLOCKS." Mr. Isaac J. Williams, Keeper of Art, The National Museum of Wales, "The British School of Water Colour Painting."

5.5-6.0.—CHILDREN'S CORNER.

6.40-6.55.—Mr. Roland Williams, M.A. "Craft Plays and Players."

7.0-11.0.—Programme S.B. from London.

2ZY MANCHESTER. 375 M.

12.30-1.30.—Organ Music by H. F. Grey. Organist from the Manchester Cathedral.

3.0-3.30. } Concert by the "2ZY" Quartet
4.0-4.30. }

3.30-4.0.—Broadcast for Schools. Mr. E. Sims HILDITCH, "Musical Appreciation."

4.30-5.0.—WOMEN'S HALF HOUR.

5.0-6.0.—CHILDREN'S CORNER.

6.30-6.55.—Local Radio Society Talk.

7.0-11.0.—Programme S.B. from London.

5NO NEWCASTLE. 400 M.

11.30-12.30.—Florrie Trotter (Soprano), Talley's Restaurant Orchestra.

3.45-5.15.—Edith Storey (Contralto). The Grange Path Colony Silver Band: Conductor, J. B. Wright.

6.1-6.2.—CHILDREN'S CORNER.

6.40-6.55.—Mr. G. F. Ogilvie, "Thirteen Weeks in Ben Nevis Observatory."

7.0-11.0.—Programme S.B. from London.

2BD ABERDEEN. 495 M.

3.30-5.0.—The Wireless Trio. A. J. Wieman (Contralto).

5.15-6.0.—CHILDREN'S CORNER: Annie Moly goes to the Fair.

6.40-7.0.—The Rev. Walter A. Marshall, "Some Victorian Novels"—Robert Louis Stevenson.

7.0-11.0.—Programme S.B. from London.

5SC GLASGOW. 420 M.

3.30-4.30.—The Wireless Quartet. Walter C. (Contralto).

4.45-5.15.—WOMEN'S HALF HOUR. Mr. J. Levis, "Cutting and Making a Sports Coat."

6.15-6.0.—CHILDREN'S CORNER.

6.0-6.5.—Weather Forecast for Farmers.

7.0-11.0.—Programme S.B. from London.

A number against a station name indicates the name of its publisher. A list of publishers will be found on page 47.

WIRELESS PROGRAMME—WEDNESDAY (March 4th.)

The letters "L.D." printed in italics in these programmes signify a Simultaneous Broadcast from the station mentioned.

2LO LONDON. 365 M.

3.15-3.45. Talk to Schools. Wireless Reviewing Appointments, by Mr. H. J. BINKS (Hague Association).

4.00-4.15. Signal from Greenwich. Col. "LO" Tim and Barbara. Song by A. B. ...

5.20-6.15. CHILDREN'S CORNER. "Toy," told by M. Catherine Wilson. M. Uncle Jeff. Stories by A. ...

6.20-6.45. Mr. W. J. LNWAN, ...

7.00-7.15. SIGNAL FROM BIG BEN. ...

7.15-7.30. RODELL. "Popularity and austerity," S.B. to all States.

Local News.

Sullivan Programme.

WYNNE AJELLO (Soprano), EDWARD LOVEREY (Tenor).

JOSEPH FARRINGTON (Bass Baritone), WINNIE VAUGHAN and ROLAND MERRY (Entertainers).

THE WIRELESS ORCHESTRA. Conducted by DAN GODFREY, June.

7.30. "Overture to 'The Merry Widow'." (11).

"The Sadler's Grave." (11).

"Love Laid His Sleepless Head." (11).

8.00-8.15. "The Ten Post." (11).

Incidental Music to "Henry VIII." (11).

9.00-9.15. "The Ten Post." (11).

9.15-9.30. "The Ten Post." (11).

9.30-9.45. "The Ten Post." (11).

9.45-10.00. "The Ten Post." (11).

10.00-10.15. "The Ten Post." (11).

10.15-10.30. "The Ten Post." (11).

10.30-10.45. "The Ten Post." (11).

10.45-11.00. "The Ten Post." (11).

11.00-11.15. "The Ten Post." (11).

11.15-11.30. "The Ten Post." (11).

11.30-11.45. "The Ten Post." (11).

11.45-12.00. "The Ten Post." (11).

A Dual Programme. A Jubilee Celebration.

THE STATION ORCHESTRA. HARRY FREEMAN (Viol.).

THOMAS FREEMAN (Violoncello), NIGEL DALLAWAY (Pianoforte).

A Short Jubilee Programme in honour of the birthday of Mr. Harry Freeman.

Major Leader of the Station Orchestra. Harry Freeman.

James Overton. The Orchestra.

MAJESTY BALLAD CONCERT WITH THE STATION ORCHESTRA.

SYDNEY COLTHAM (Soprano), SYDNEY COLTHAM (Tenor).

BRET HAYDEN (Entertainer), Nora Delmar.

"Ritorna Vincter" ("A Victor Thet").

"We All Love a Pretty Girl." (11).

"The Night Wind." (11).

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2ZY MANCHESTER. 375 M.

3.0-3.30. Music relayed from the Piercedilly Picture Theatre. Conductor, Stanley E. Mills.

3.30-4.0. Broadcast for Primary Schools. Father BERNARD BUTLER, S. J.

4.0-4.30. WOMEN'S HALF HOUR. A ...

4.30-5.0. CHILDREN'S CORNER. ...

5.0-5.15. Major W. Peck. Travel Abroad." (1).

5.15-5.30. WEATHER FORECAST and NEWS. S.B. from London.

5.30-5.45. Lord RIDDELL. S.B. from London.

5.45-6.0. Local News.

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68M BOURNEMOUTH. 385 M.

3.0-3.30. Service for the Sick. Gratia De ...

3.30-4.0. The Wireless String Orchestra. Conductor, Capt. W. A. Featherstone.

4.0-4.30. CHILDERN'S CORNER. ...

4.30-5.0. Schools Half Hour. A Sixteenth Century Scholar at Home, by Mrs. Eric Sharpe, M.A.

5.0-5.15. Talk by Herbert Fryer, Station Director.

5.15-5.30. WEATHER FORECAST and NEWS. S.B. from London.

5.30-5.45. Lord RIDDELL. S.B. from London.

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THE CHILDREN'S CORNER.

CONDUCTED BY THE AUNTS AND UNCLES.

A Wonderful Voyage of Discovery.

Here is a talk by C. M. Gray that you will certainly like to read. It will make you more interested in your study of geography.

About the years 800 to 1000 A.D. the Norsemen sailed and these navigators and about the year 1492 A.D. they reached the continent of North America and explored the coasts of America along the Labrador coast and the distance to the east of the St. Lawrence.

The years following the discovery of the New World and the first voyage of Christopher Columbus, the first voyage of discovery, and rightly known as the Dark Ages. Everything seemed to stagnate, and effort in every line seemed to fall off. The caravans of India and Carthage at least were no longer to be seen in Africa. A Greek, whose work was in the Middle Ages, made a mistake. He said that it was not possible to prove this. He said, "discovery would be explorers from discovering upon."

An Ambitious Project.

At first land travel was the only means of communicating with the treasures of the East, India and China. Then later, about the year 1428 to 1460, Prince Henry of Portugal began to encourage sea travel. He gave instructions for exploring the coasts of Africa and had several maps made for his captains.

Under his guidance, the old superstitions were gradually dispelled. Trade with the East was exceptionally valuable, but rivalry for this trade, and the longer of the overland route, made the journey less and less attractive. But the wealth was there and the lure of it was powerful. Men wanted the treasure and the easy way to obtain it.

If you will look at a map of the world, you will see that the obvious way to this treasure of

the East would be to sail round the coast of Africa, and across the Indian Ocean to India. But remember that the fact that it was possible to sail around the coast of Africa had been forgotten—that is to the geography of Ptolemy, Prince Henry devoted himself to this problem, however, and gradually his sailors pushed further and further along the coast of Africa. He himself did not live to see the results of his initiative and later explorers.

Magellan's Great Adventure.

In 1498 Cape Verde was rediscovered. Then Diaz sailed around the Cape of Good Hope, and by the end of the century Vasco da Gama sailed in the great enterprise and had reached India by sailing round Africa, and Columbus had reached America.

In the year 1519 another attempt was made with a result in the first voyage round the world. In 1519 a Portuguese navigator, Magellan, began to argue that if it were possible to sail round the south of Africa, it must be equally possible to sail round the south of America and so reach China. He set sail in August, 1519, just over 400 years ago—with five ships and 81 men. His ships were old and unworthy. Leaving the port of Seville, in Spain, he first made his way to the Canary Islands. He writes in his diary that in one of these islands there is not a drop of water to be found in either river or fountain, but once a day there descends a large cloud from heaven which surrounds a tree and falls upon the leaves of the tree and the leaves catch the water and water flows from the leaves of the tree.

Magellan made his way across the Atlantic to the coast of Brazil, and shortly after he entered the River of la Plata, now known as the mouth of the River of the Plate. He sailed the coast of America. Magellan, according to his account, traveled

about and with a view of a bad. The people here were living in that part now called Patagonia on the south-eastern of South America. On his coast the ships were wrecked and lost and rebellion and mutiny broke out. The fleet was put down with a firm hand. He went to the mainland of the continent. They were beleaguered and quartered. He would not turn back although when he got to the southernmost extremity of South America he had to face a very severe storm. It took three days to get through the Straits which now

Dread While Fighting.

In November 2nd, 1520, fifteen months after leaving the home port, Magellan found himself in the Straits of a sea which he named "The Peaceful Ocean." The Pacific was his little sea. His ship was unworthy and faced with heavy head winds, but was so small that she could not carry many provisions. By the time she had reached the Straits, the provisions were reduced to a few days' supply.

After passing two small desolate islands which they named the Unfortunate Islands, Magellan reached islands to which he gave an equally unattractive name—the Land of Rebellions—these were the Marianas Islands which were by Spain to Germany about twenty years later.

Eventually, Magellan reached the Philippine Islands, where the crews were able to rest after their exertions. Shortly afterwards, however, in a petty squabble and tribal war that broke out, Magellan was killed. He died fighting. Wounded first by a poisoned arrow, he used the word for his men to fall back steadily towards the beach, but the retreat soon became a scramble for safety. Only six or seven men remained around their captain. The rest saved

THE STORY WITHOUT AN END.

By LANGFORD REED.



The Vizier brought before him an old man.

SINCE his first journey with Selim and Hassan, which I have already related, Mustapha Bey Nana, the Caliph of Bagdad, had made other attempts to follow the example of the great Haroun Al Raschid, of "Arabian Nights."

Some, by walking about the streets of the city dressed with the idea of coming into touch with some of his subjects who had interesting stories to tell.

But he met with no success at all and his failure annoyed him greatly. As usual, he

vested his hope upon his unfortunate Vizier, Gracchus. The Vizier bowed deeply.

"Pardon, Excellency," he said, "I ventured to think that if the Caliph Haroun could secure entertainment by those means, you, who are a much greater, could not fail."

Well, there is something in that, you asked Mustapha, more curious than I do have a sense of common sense occasionally. So I rely on you to find me someone with a good story to tell by next Saturday evening. Fair at your peril!

Judge of the Caliph's delight when, on Saturday evening, the Vizier brought before him a shabby old man with a hooked nose and a merry eye and explained that he was a travelling pedlar from Jerusalem, who boasted that he had a tale to tell which had no end.

You appear to be a person of considerable intelligence, despite your mean appearance," observed the Caliph. "Begin at once. I will reward you for a week's trial and pay you a one-hundred piastre piece every night."

The old man's eyes gleamed. Then he glanced at the Caliph doubtfully. The latter noticed the look and said reassuringly—

You have nothing to fear. I will do as I say. Begin at once, and if you please me, your fortune is made. But if your story is an empty tale, I'll have you fried in dripping.

The shabby stranger again looked at the Caliph, with a sly sidelong glance. Then he

answered: "Oh, Great One, if I deceive thee let my fate be as threatened. Now that I have assurance of thy protection, my mind is easy within me." Then, again, protesting himself as before as follows—

"Oh, Magnificence, there was a certain Caliph, who commanded his slave to tell him a story and the slave prostrated his unworthy person and began as follows: 'Oh, Magnificence, there was a certain Caliph who commanded his slave to tell him a story. And the slave—'

"Bismillah!" exclaimed Mustapha. "It seems to be a great assurance about that story. Leave out the introduction and get on to something more."

It would spoil the story, oh, All-Powerful One," said the old man. "But I'll hurry over that part—who commanded his slave to tell him a story. And the slave prostrated his unworthy person and began as follows: 'Oh, Magnificence, there was a certain Caliph who commanded his slave to tell him a story. And the slave prostrated his unworthy person and began as follows: 'Oh, Magnificence—'

"Veritable trickster!" broke in the cunning Caliph, "truly your story has no end, since it is all beginning! Fortunately it is for you that my vow protects you. My treasurer will pay you a week's wages and conduct you outside the city. And if ever you dare to set foot within it again, I'll have you posioned on toast and served up as breakfast for the next crocodiles!"

WIRELESS PROGRAMME—THURSDAY (March 5th.)

The letters "S.B." printed in italics in these programmes signify a Simultaneous Broadcast from the station mentioned.

210 LONDON. 365 M.

1.0-2.0 Time Signal from Greenwich. The Week's Concert of New Gramophone Records.

1.0-2.45 Transmission to Schools: "Cinderella in Dickens—David Copperfield. Lecture Recital by J. C. STOBART and L. P. JEFFREY.

4.0-6.0 Time Signal from Greenwich. "New Letters of O. Togo," by O. Roman-James. Music performed during AB. noon Tea at the Transients. "The Inhabited Island" by Mrs. H. A. I. Fisher, Chairman of the Council for the Unmarried Mother and Her Child.

6.15-CHILDREN'S CORNER: "Stories of Finland," told by Ethel Harding L. G. M. of the Daily Mail—Zoo Story "Earning a Living at the Zoo." Pianoforte Solos by Margaret Portch.

6.35-Market prices for Farmers.

6.40-6.55 The Rt. Hon. Lord HALESTON S.B. from Birmingham.

7.0 TIME SIGNAL FROM GREENWICH. WEATHER FORECAST and CENTRAL NEWS BULLETIN S.B. to all Stations.

Mr. ALLEN S. WALKER, "Architecture: The Cathedrals of York, Ely, Exeter and Southwell" S.B. to all Stations.

Talk by the Radio Society of Great Britain S.B. to all Stations.

Local News.

Chamber Music Evening.

JOHN COATES (Tenor).

THE PHILHARMONIC PIANOFORTE QUARTET.

CHARLES KELLY (Pianoforte).

PAUL BEARD (Violin).

FRANK VENTON (Viola).

JOHAN O. BOCK (Violoncello).

7.35 The Quartet.

Quartet in C Minor, Op. 13 R. Strauss.

8.0 Poetry Readings by J. C. SQUIRE.

8.30 Modern English Songs.

Pleading Elgar (11).

London Tea John W. Home (11).

A Run of Wandering Hamilton Harry (11).

Poo Late Athens (11).

Endorah Mafferson (11).

The Fiddler of Dooney Thomas Dunhill (14).

Elanore Oldridge-Taylor (11).

8.40 The Quartet.

First Movement from Quartet.

Let's 1870-1904.

8.55 John Coates.

Portuguese Songs.

Mac Night Berlin.

Movings Schuster.

9.0 The Quartet.

A Salute from Quartet in E Flat, Op. 60.

Beethoven.

Amale Presto (Rit. in alla Zingaresca) from Quartet in G Major, Op. 25. Brahms.

9.15 TIME SIGNAL FROM GREENWICH.

WEATHER FORECAST and CENTRAL NEWS BULLETIN S.B.

9.30 Capital Talk S.B. to all Stations.

Local News.

9.45-10.00 THE SAVOY ORPHEANS and SAVOY HAVANA BAND, relayed from the Savoy Hotel, London. S.B. to all.

10.0 Close down.

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1.30-1.45 Close down.

1.50-2.00 Close down.

2.05-2.20 Close down.

2.30-3.00-CHILDREN'S CORNER. Musical Stories, "Things We Don't Learn at School."

3.10-3.40-"Pioneers' Corner: Frank Jones, "Grammar and Spelling."

3.50-4.20-Boy Scouts' and Girl Guides' Bulletin: The Rt. Hon. Lord HALESTON (President of the Birmingham Scouts' Association), "The Scout Movement," S.B. to other Stations.

4.30-4.55-Programme S.B. from London.

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2.35-2.55-Programme S.B. from London.

3.0-3.30-Programme S.B. from London.

Carl Fuchs, "Hallelujah" (Hebrew Melody) trans. by Bantock.

3.10-3.40-Nora Demaree, "Mourning Song."

3.50-4.20-Wanda Post, "Wanda Post."

4.30-4.55-Song of the Moon, Lady Gregory.

5.0-5.30-Orchestral Suite, "Song of Sadness," Arensky.

5.35-5.55-Spanish Serenade, Liszt.

6.0-6.30-THE HALL OF MIRRORS, relayed from the Free Trade Hall.

6.35-6.55-WILLIAM MURDOCH (Solo Pianoforte).

7.0-7.30-Concerto for Pianoforte in C Minor, Brahms.

7.35-7.55-Orchestra, "Pier le jour de la mort," Japan.

8.0-8.30-First time in Manchester! William Murdoch.

8.35-8.55-Mezzo Voice, "L'Enfant Prodigue," Rossini.

9.0-9.30-WEATHER FORECAST and NEWS, relayed from London.

9.35-9.55-Local News.

10.0-10.30-THE SAVOY BANDS, S.B. from London.

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9.0-9.30-Close down.

9.35-9.55-Close down.

10.0-10.30-Close down.

10.35-10.55-Close down.

11.0-11.30-Close down.

11.35-11.55-Close down.

12.0-12.30-Close down.

12.35-12.55-Close down.

1.0-1.30-Close down.

1.35-1.55-Close down.

2.0-2.30-Close down.

2.35-2.55-Close down.

3.0-3.30-Close down.

A number against a musical item indicates the name of its publisher. A list of publishers will be found on page 44.

WIRELESS PROGRAMME—SATURDAY (March 7th.)

The letters "S.B." printed in italics in these programmes signify a simultaneous broadcast from the station mentioned.

2LO LONDON. 365 M.

4.0-5.30.—The Signal from Greenwich. BANI OF LADEN THEODO SEIBERT. Headmaster. Mr. G. M. H. M. Marva.

5.30-6.00.—D. Farley W. L. J. CHILLIERS CORNER. by the Great. The Radio Club. Fire-side Talks (3), told by Edith S. Jones.

6.0-6.30.—Mr. J. REX JONES B.A., 'Com. of Arts.

7.0.—THE SIGNAL FROM BIG BEN. WEATHER FORECAST and NEWS. CENTRAL NEWS BULLETIN. S.B.

Mr. A. LLOYD JAMES. Lecturer. Phonograph at the University of London. More Facts About Our Speech. S.B. to all stations. Local News.

Popular Operatic Evening.

FRIDU JOHNSON (S)

GLADYS PALMER (Contralto)

ELBERT CARTER (Tenor)

DENNIS NOBLE (Baritone)

WIRELESS SYMPHONY ORCHESTRA

Conducted by

STANTON JELLES

7.30.—The Orchestra

Overture, The Bohemian Girl

Edith Smythe (S)

The Bohemian Girl (Act II: Romeo and Juliet)

Edith Smythe (S)

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Local N

Operatic Programme.

PAINT

Margaret LEATHRICK MIRANDA

Naomi CONSTANCE WALLIS

Harry JONES

William M. Hall

NO MAN ALLIN

STATION SYMPHONY

ORCHESTRA

THE CITY OF BIRMINGHAM

for J. P. L. W.

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68M BOURNEMOUTH. 385 M.

3.15-5.0.—Tues to Women's 'Concert Life' by

Beryl Trevelyan, B.A. The ROYAL

BATH HOTEL DANCE ORCHESTRA,

led from King's Hall Room.

Director, DAVID S. LEE.

Director and Charles Crawford.

Director and Charles Crawford.

Director and Charles Crawford.

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Director and Charles Crawford.

Director

WIRELESS PROGRAMME-SATURDAY (Mar. 7th.)

The letters S.B. printed in italics in these programmes signify a Simultaneous Broadcast from the station mentioned.

2BD ABERDEEN. 495 M.
 5.0-5.15.—The Wireless Trio. Mary Topp
 5.15-5.30.—CHILDREN'S CORNER. Songs by
 5.30-5.45.—This Week's Interesting Anniversary
 (prepared by John Sparkes Kirkland).
 Soliman League and Covenant, sub-
 scribed March 1st, 1936.
 5.45-6.00.—Mr. William Bondysson, Royal
 6.00-6.15.—S.B. from London.
 6.15-6.30.—Mr. A. FLOYD CAMPBELL
 6.30-6.45.—Two Soloists: Orchestra.
 6.45-7.00.—NORMAN MARSH
 7.00-7.15.—THE WIRELESS ORCHESTRA.
 7.15-7.30.—Jewel Song "I Found" Council
 7.30-7.45.—"The Night Wind" Percy
 7.45-8.00.—S.B. from London.
 8.00-8.15.—"Devonshire Cream and Cider"
 8.15-8.30.—"Meridian Roadways" Eric Coates
 8.30-8.45.—Ma "Bonnie Blue Bonnets" de Ville
 8.45-9.00.—Ma "Bonnie Blue Bonnets" de Ville
 9.00-9.15.—"All For You" Easthope Morton (5)

5.45 the Ousey... Bolton (5)
 5.50...
 9.15... Elder Cunningham,
 "Lighthouse Tom" Sympre
 "The Little Irish Girl" Lake
 "The Old Warrior" Trotter
 9.20-9.30. Programme S.B. from London.

55C GLASGOW. 420 M.
 5.45-6.00.—W. Kersley Holmes. "Up the
 Dwyra River."
 6.00-6.15.—W. Kersley Holmes. "Up the
 Dwyra River."
 6.15-6.30.—W. Kersley Holmes. "Up the
 Dwyra River."
 6.30-6.45.—W. Kersley Holmes. "Up the
 Dwyra River."
 6.45-7.00.—W. Kersley Holmes. "Up the
 Dwyra River."
 7.00-7.15.—W. Kersley Holmes. "Up the
 Dwyra River."
 7.15-7.30.—W. Kersley Holmes. "Up the
 Dwyra River."
 7.30-7.45.—W. Kersley Holmes. "Up the
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 7.45-8.00.—W. Kersley Holmes. "Up the
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 8.00-8.15.—W. Kersley Holmes. "Up the
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 8.15-8.30.—W. Kersley Holmes. "Up the
 Dwyra River."
 8.30-8.45.—W. Kersley Holmes. "Up the
 Dwyra River."
 8.45-9.00.—W. Kersley Holmes. "Up the
 Dwyra River."

Ballad Concert.
 THE STATION ORCHESTRA.
 I. ROBERT A. GILFILLAN.
 ANY S. B. FROM LONDON.
 Selection of Tosti's Popular Songs.
 "O Lovely Night" London Ronald (5)
 "Rise Softly Blooming" Spahr
 "The Sweetest Flower that Grows"
 "O Fair and Sweet and Holy" Robinson
 8.10.—Orchestra.
 8.15.—Orchestra.
 8.20.—Orchestra.
 8.25.—Orchestra.
 8.30.—Orchestra.
 8.35.—Orchestra.
 8.40.—Orchestra.
 8.45.—Orchestra.
 8.50.—Orchestra.
 8.55.—Orchestra.
 9.00.—Orchestra.
 9.05.—Orchestra.
 9.10.—Orchestra.
 9.15.—Orchestra.
 9.20.—Orchestra.
 9.25.—Orchestra.
 9.30.—Orchestra.
 9.35.—Orchestra.
 9.40.—Orchestra.
 9.45.—Orchestra.
 9.50.—Orchestra.
 9.55.—Orchestra.
 10.00.—Orchestra.

EVENTS OF THE WEEK.

SUNDAY March 1st

LONDON and "5XX" 3.0. St David's
 Day Programme S.B. to other Stations.
 LONDON and "5XX" 9.0. De Croot
 and the Piccadilly Orchestra. S.B. to
 other Stations.
 BIRMINGHAM. 3.0. Light Classical
 Programme.
 BOURNEMOUTH. 9.0. The J. H. Square
 Celeste Octet.
 MANCHESTER. 3.0.—Welsh Programme.
 NEWCASTLE. 9.0. Philharmonic Con-
 cert, relayed from the Palace Theatre.

MONDAY, March 2nd

BIRMINGHAM. 7.35. Music and Plays.
 BOURNEMOUTH 7.35. "England, Ire-
 land, Scotland, and Wales"
 MANCHESTER. 7.35. Symphony Con-
 cert.
 ABERDEEN. 8.0. An Hour of Poetry
 and Fairy Music.
 GLASGOW. 7.35.—"Jeane Doss" or
 "The Heart of Midlothian" (Sir Walter
 Scott).
 BELFAST. 7.35. Songs and Folk Music

TUESDAY, March 3rd

"5XX." 7.30.—Excerpts from Shakes-
 peare.
 ALL STATIONS except "5XX," 7.30
 "The Sea," 10.0. "The Country"

WEDNESDAY, March 4th

LONDON. 7.10. Lord RIDDELL on
 "Popularity and Posterity." S.B. to
 all Stations.
 LONDON and "5XX," 7.30. Sullivan
 Programme.
 BIRMINGHAM 7.30. A Jubilee Celebra-
 tion and Ballads.
 BOURNEMOUTH. 7.30. Winter Gardens
 Evening.
 CARDIFF. 7.30. Symphony Concert, re-
 layed from Bristol Conductor
 EUGENE GOOSSENS.
 NEWCASTLE. 7.30. Selections from
 Opera.
 BELFAST. 7.30.—Symphony Concert

THURSDAY, March 5th

LONDON. 7.35.—Chamber Music Evening.
 Recital of Songs by JOHN COATES
 S.B. to other Stations.
 MANCHESTER and "5XX," 8.50. The
 HALL ORCHESTRA, conducted by
 HAMILTON BARRY. Relayed from
 the Free Trade Hall, Manchester.
 NEWCASTLE. 7.35 "A Night in
 Bawley"
 GLASGOW 7.35. Border Scenes
 BELFAST. 7.35. Musical Comedy Night.

FRIDAY, March 6th

LONDON and "5XX," 7.30. Italian
 Night.
 BOURNEMOUTH. 7.30.—British and
 French Music.
 CARDIFF 7.30 "Voices from the Void"
 MANCHESTER. 7.30. Concert relayed
 from Houndsditch Hall
 GLASGOW 7.30. Birthday Programme.
 S.B. to other Stations

SATURDAY March 7th

LONDON and "5XX," 7.30.—Popular
 Operatic Evening.
 BIRMINGHAM. 7.30.—The Opera
 House.
 CARDIFF. 7.30. "Dancing Rouns the
 World."
 MANCHESTER. 7.30. "A Night in
 Bawley"
 GLASGOW and "5XX," 7.30. Ballad
 Concert.

A figure at against a musical note indicates the station
 of the publisher. A key list of publishers will be found on
 page 414.

20!

REDUCED PRICE

You are now able to buy the most reliable and efficient British Headphones at greatly reduced price. But the class of material used remains unaltered and still the highest manufacturing ideal—control the quality of the product. You simply get the same value for less money.

Matched Tone means that both your ears hear exactly the same sound at the same instant and you learn a new beauty of tone. Ask your Dealer for Brandes.

*British Manufacture
(B.B.C. Stamped)*

Brandes

The name to know in Radio

BRANDES LIMITED, 296, Regent Street, W 1,
Works: Slough, Bucks.

Superior "Matched Tone" Headphones

TRADE MARK

BUY THE : BEST : FOR : LESS

Learning Music by Radio.

A Love for the "Classics" Gained by Listening.

TWO years ago I was a complete Philistine so far as music is concerned. Of good music I knew very little indeed, and had I been invited to attend the finest concert in the world, it is more than likely that I should have sought to find some excuse for refusing. My case was, I suppose, typical of that of thousands upon thousands of Englishmen, who, though fairly well taught in other ways, have never received any kind of musical education.

Some people have an instinctive love of music which enables them to appreciate the best though they may not fully comprehend it. But in most of us, I imagine, the natural untrained musical sense does not do much more than produce a liking for a well-marked melody such as is easily memorized and can be whistled or hummed.

Melody Before Harmony.

There must be few who do not enjoy hearing such classical pieces as the Soldiers' Chorus from *Faust*, the Toreador's Song from *Carmina*, and the Pagan's Chorus from *Tannhäuser*, and I think that the reason why these pieces make such a universal appeal is that each of them has a very obvious and easily-remembered melody. Much the same may be said of Rachmaninoff's *Prelude*, Grieg's *Solweig's Song*, Mendelssohn's *Songs Without Words*, Rubinstein's *Melody in F* or many of the songs of Brahms. But it is not the harmonies that appeal to the man with no musical knowledge; it is purely and simply the melody. It is this that he remembers and enjoys. Most probably he likes pieces of the kind mentioned largely because he can remember them after he has heard them played.

To be able to hear and appreciate only the air is rather like seeing merely the strongly marked outlines of a picture without perceiving anything of the fine lines, the shading, the colour, and the grouping which combine to make up a thing of beauty.

The eye is naturally a finer instrument of perception than the ear, conveying ideas more quickly and more clearly to the brain. The ear requires a good deal of training to be anything like as efficient.

For the Untrained Ear.

Until broadcasting began, the average man probably heard very little good music indeed. He did not go to concerts—the very thought of having to sit through a pianoforte recital oratorio would have made him shudder. The

musical comedy, and the popular band performances entered exactly for his tastes. They gave him just the music that his untrained ear could understand, and he asked for nothing more.

Wireless has worked, and is working, the most amazing revolution in the musical tastes of the nation. It has brought good music into every home. And, besides this, the musical talks so frequently broadcast have helped thousands in the street to understand.

Bored by the Sonata.

We were frankly bored not so very long ago by a sonata. The name meant no harm at all to us, and the piece as played appeared to consist of three long spells of meaningless noise just repeated from one another only in that some were faster or slower or softer or louder than others.

The talks and explanations so abundantly given have served to show us a great many things. With their help, we have discovered that there is some meaning in the sonata. But above all, we have discovered that as far from being as we imagined, utterly bereft of tunes, good music is full of them, and that they are far more pleasing than the catchy, obvious airs

that used to make the only musical appeal to

And there is a great deal more in it than this. Even the most case-hardened Philistine, if he listens nightly to good music brought in by his wireless set, comes to realize in time that he is enjoying the wonderful harmonies, the lights and shades, the subtle points of arrangement and design, and that he is getting something of the spirit of the music.

Arm-chair Education.

In a word, one receives with the help of the wireless set a musical education, in the easiest and simplest way. You need not leave your own house, or even your own armchair. You need not dread having to sit through something that is far above your comprehension, for if you are bored, you can always switch off. Possibly you do switch off frequently if you are a Philistine in your early days as a listener. But you soon find that it is becoming less and less of an effort to listen to good music. There comes the second stage when you discover that you are actually liking some "high-brow" piece, and from that point onwards your progress is rapid.

R. DE FORSTON

Later Broadcasting.

Extension of the Present Rota.

LISTENERS will be interested to know that the late night broadcast will be extended. At 10.30 p.m. every station, except one, will make the following announcement:

"This station is now closing down until tomorrow morning, but the — station will be doing an experimental transmission for the interest of those anxious wishing to carry out long-distance reception. Thanks to the cooperation of local stations, a tuning note will be sent out for two minutes in this district by a member of the Transmitter and Relay Section of the Radio Society of Great Britain, giving the exact wave-length on which the — station is transmitting. Experimenters are requested to tune in to this wave-length and, as far as possible, the station taking late rota duty will send out a tuning note lasting for four minutes in contrast to the local tuning note of two minutes. The station will then transmit ordinary items for the first ten minutes at over modulation, for the next ten minutes at normal modulation, and afterwards below normal modulation."

The station taking late rota duty will send

out a tuning note lasting for four minutes in contrast to the local tuning note of two minutes. The station will then transmit ordinary items for the first ten minutes at over modulation, for the next ten minutes at normal modulation, and afterwards below normal modulation.

Postponement Unlikely.

It must, however, be pointed out that it may be necessary sometimes to continue the ordinary programmes after 10.30 p.m., in which case, the late rota will not be from 10.30 to 11 p.m., but will commence half an hour after the last station of the Broadcasting Company has shut down. In the case of the ordinary programme lasting until after 11.30, the late night transmission will be curtailed so as to end at midnight. In the event of the ordinary programme lasting until midnight, the late transmission for the week will be cancelled. It is unlikely that a postponement of the late rota will be a matter of great occurrence.

The *Radio Times* will give an indication as to the station taking late rota duty by means of a station making the announcement above mentioned. It is hoped by this means that experimenters and others interested in long-distance reception will have an opportunity of ascertaining the qualities of their sets.

If possible, this arrangement will be every Monday, starting on March 2nd, and the first station on the new rota will be Glasgow

"A Factor of Safety."

Getting the Best From Your Set.

MANY people have asked what is meant by having a set with "a factor of safety." I will try to illustrate what I mean by a few concrete examples. You go to a friend's house and you are asked if you would like to listen to the wireless.

First, the headphones; the valves are warm, and you turn the knobs. After a few moments of knob twiddling, suddenly a shriek, "weet, weat." The shriek gently falls away, and you hear a few faint, distant sounds of music. The shriek goes up again, and you are brought back to a matter, and so on until one just faintly hears distant

Test Hours.

You thankfully go home to your own set, and behold! the Savoy—clear, clean, never a note or a whistle or a period of silence. You are in luck. Your set had a factor of safety, the other had not.

The same with that crystal set you well know. Is it not awful to sit through those test hours, phones pressed to ears, straining a set at a set of test hours at the station transmitting set that will not play the game and send out the stuff at decent strength? And it is all so unnecessary.

It may be thought by some that I am trying to hold up the transmission as perfect, and condemn the receiver. On the contrary, I am not doing justice to the transmitter, even with the latter's manifold faults. I speak of only some sets, remember, not all, there may be many thousands that are adequate criterion of judgment for the transmission.

Helpful Hints.

Here is some general advice to those who are the owners of the first-mentioned sets.

(a) Let us take a circle of five miles from a main station (Aberdeen, Belfast, Birmingham, Bourne, Cardiff, Glasgow, Manchester, etc.).

(b) Now take a circle of five miles from a relay station (Dunfermline, Edinburgh, Hull, Leeds—Bradford, Liverpool, Nottingham, Plymouth, Sheffield, Stoke-on-Trent, Swansea), or 20 miles from the High Power station (Chelmsford)—crystal reception with a good outdoor aerial is splendid. (Crystal reception with an indoor aerial may be good, but beware of scrappy aereals hung up anyhow with, perhaps, a poor gas pipe rather than water-pipe earth. For loud speaker results, I think with a circle of five miles two valves are necessary—one detector, and one note magnifier.

Beware of Indoor Aereals.

(c) Now in a circle of 15 miles from a main station or 100 miles from a relay or 100 miles from the High Power—crystal reception with a good outdoor aerial is adequate, but beware of indoor aereals unless they can be made really good, not just a few yards of wire in a room. For loud speaker results I advise a detector and two note magnifiers, and a good outdoor aerial.

(d) Finally, in a circle of 40 miles from a main station, 12 miles from a relay and 200 miles from the High Power Station, I think that 2 miles is the limit of crystal reception from a main station; five miles from a relay station or 100 miles from the High Power Station.

For sets from 100, then, for the above mentioned, I should ask for one high frequency and the detector for these ranges with a good outdoor aerial, and I should add two note magnifiers for loud speaker.

All the above may sound very conservative, many enthusiasts may be using fewer valves, but to those who are unsatisfied, I would say work to the above specifications, and you will get the best from your set. P. H. T.

Britain to India by Motor-Car.

A Record-Breaking Journey to the East. By Major FORBES LEITH.*

TEN months ago, I decided to make an attempt to reach India by motor-car. Aerialplanes had proved their ability to get there, but no effort had yet been made to bridge the distance by road.

There were many objects to be attained. First, I was convinced that, if successful, it would prove the efficiency of British-made cars in a market that has been almost entirely captured by the foreigners. Secondly, it would open up a new route and means of commercial intercourse in and between the countries traversed, where railways are scarce, or nonexistent. Thirdly, it would offer great scope for making a film of travel, which would be of great interest and also extremely valuable from an educational point of view.

One Car all the Way.

After very careful consideration, I came to the conclusion that to attempt to carry the expedition through with one car only, would afford us the greatest chance of success. This car must be light enough to be man-handled often, and yet powerful enough to carry a very heavy load and to climb any gradient.

Eventually, a strongly built 14 h.p. car was chosen and, with the exception of being fitted with extra tanks, it was an ordinary standard model.

My companions were Mr. Allan Wroe, of Leeds, and Mr. Montague Reiknap, of London, the latter of whom was an expert cinematographer. Both had had some previous experience of the Tropics and were well fitted to stand the discomforts and hardships we had to anticipate.

Our Limited Outfit.

Our route was planned by way of Paris, Monte Carlo, Genoa, Venice, Trieste, Fiume, Belgrade, Sofia, Adrianople, Constantinople, Ismid, Alom, Karaman, Adana, Alexandretta, Aleppo, Damascus, Bagdad, Hamadan, Teheran, Isfahan, Shiraz, Kerman, Bam, Jeddah, and Qatif.

Spares and extra film were dumped at Belgrade, Constantinople, Alexandretta, and Bagdad. Each of these places was many hundred miles apart, and for the last 2,700 miles onward from Bagdad we had no dumps. We carried an extra spare parts with us than the average motorist would take with him on a trip to Land's End. Personal baggage had to be limited to an allowance of 35 pounds per man, and as this had to include heavy clothes for Europe, and also a tropical outfit it was a matter of extreme difficulty to concentrate on the essentials. The car, compounded with extra weights, gave us a load of three-quarters of a ton, which with a car weighing six and a quarter tons made our total weight just two tons.

We left London on April 29th, 1924, and arrived at Qatif on October 24th, a period

of nearly six months, out of which, however, we were running only ninety-six days.

We were delayed for many reasons. Our dumps went astray; Reiknap had three bad attacks of malaria; Wroe developed a bad fever in Teheran which was diagnosed as enteric after a delay of three weeks; also, we had frequently to stay for days at a time in many places, to obtain interesting subjects for the film. Right through France and Italy and up to the Jugo-Slav border the going was good, from there onward through Croatia, Slavonia, Serbia, Bulgaria and Turkey it was terrible.

These countries had been in a continual state of war since 1911, and from that time they have had no money available for road-building, so every penny has been spent in repairing their railways and ruined buildings. What were once fine metalled highways had been worn to nothing and even the foundations had disappeared in most of them.

A King's Interest.

Between Belgrade and Constantinople we came across forty broken bridges over rivers and streams, which added greatly to our difficulties. For miles and miles on either side of each frontier we crossed in the Balkans, grass grew feet high on the disused roads, making it almost impossible to see the remains of the highway.

Whilst in Sofia, we were received by King Boris, of Bulgaria. He is a keen motorist, an all-round sportsman, and as popular with the Bulgarians as our own Prince is with us.

He took a great interest in the car and our expedition, and supplied us with useful information on the route to the Balkans. In Asia Minor a road exists which was built by Alexander the Great, but it appeared to us that no effort had been made to repair it since he built it.

As we followed this road, it disappeared for miles at a time and its condition may be imagined by the fact that our average speed was only 25 miles per hour, for the whole of the twenty days we took to cross this country.

From Aleppo to Damascus there is a caravan track which in the dry season is good. From thence to Bagdad the way lay across the great Syrian desert, a distance of 542 miles, with only one well, the whole way, and where one

cannot see a solitary blade of grass. Before leaving Damascus, we visited the ruins of Baalbek, the Heliopolis of the Ancients, which is situated in the fertile hills of Lebanon.

In Bagdad we moved sixty miles away to the ruins of Babylon, the scene of the former greatness of Hamurabi and Nebuchadnezzar.

Photography Under Difficulties.

We also visited the ruins of Ctesiphon, the Palace of the Parthian Kings, where the wonderful Arch of Chosroes still exists in a good state of preservation. It was here that General Townsend, with his depleted and disease-ridden Division, fought a great battle against a fresh and reinforced Turkish Army before retiring on Kut-el-Amara.

From Bagdad to the Persian Province of Khorasan was still desert track, but from thence to Teheran, the capital of Persia, were six hundred miles of excellent metalled road, passing through Kermanshah, Hamadan and Kasvin.

Hamadan is the ancient city of Ekbatana, where Xerxes built his famous seven-walled Palace, and the ruins of this can still be seen. In Teheran we were privileged to see the wonderful Peacock Throne which was taken by the Persians at the sack of Delhi. It is built of solid gold, and set with precious stones, which are reputed to be worth seven million pounds. Here we were obliged to do all our photography under a strong escort, on account of the fact that a few weeks before our arrival, Major Hubert, the American Consul, was murdered by the mob whilst taking photographs at a secret place.

Two Thousand Miles of Desert.

From here onward for the last 2,000 miles we travelled alternately across desert, salt desert, and almost impassable mountain ranges.

When near Shiraz, we passed the wonderful ruins of Persepolis, which the old Persians called Achamemeneh, by the great destruction of Darius.

The last 600 miles of our journey were heart-breaking, and being our continual highest. The extent of this trouble may be better realized by the fact that on one occasion when we covered a distance of six hundred yards, our speedometer registered 8½ miles.

We covered a total distance of 8,527 miles, 1,000 miles of which were on roads, 2,700 miles were absolute desert, 400 miles salt desert, 100 miles bottomless silver sand, and we bumped for 250 miles over the railway sleepers.

Our total bill for spare parts was under three pounds, two pairs of brake-rings, one rubber

fabric disc for the universal joint, and three spring leaves being all that was used. We used only two sets of tyres on the whole journey, and had only two punctures. The greatest lesson of the whole trip is the fact that with moderate expenditure motor transport on a remote and basis could be made practicable in a few years, and would open to the manufacturers the magnitude of which is beyond imagination.



Major Forbes Leith in the car which made the adventurous journey to India.

* In a talk from London.



Awaken your receiver to vigorous, tuneful life!

GIVE to your home the added pleasure of the perfect radio reproducer—the "Sparta." The voice that makes your receiver a living thing—faithfully re-creating the performance exactly as it is given before the microphone.

The "Sparta" is the Speaker of combined excellence—the supremely good combination of

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All good dealers stock the "Sparta." Ask for a demonstration and let your own ears prove how extraordinarily good its reproduction is.

Type	H.A.	2,000 ohms
Type	H.H.A.	4,000 ohms
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SPARTA

LOUD SPEAKER

Type "B."	320 ohms	85 15 0.
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(Type B Speakers incorporate a 6 push on tone selector)		

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A small brother of the full size "Sparta." The perfect miniature Loud Speaker, attractively finished in dull black and oxidized silver. In its construction is included an adjustable diaphragm. Made in 120, 2,000 and 4,000 ohms.

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By F. W. THOMAS

SELENIUM A KEY TO TELEVISION

By E. E. FOURNIER D'ALBE.

AT 2, SAVOY HILL, W.C.2

A Page Contributed by the B.B.C

KEEPING THE HOME FIRES BURNING.

By E. V. KNOX ("Evoc" of Punch).

MY FIVE-VALVE RECEIVER.

By a Boy of Fifteen.

WHAT I THINK OF BROADCAST TALKS.

By J. C. STOBART, Director of Education, B.B.C

OUR CROSS-WORD THREE-VALVER.

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THE EVOLUTION OF THE CRYSTAL SET

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constituting coloured wiring diagrams and full-size panel-drilling templates for two notable wireless sets: a selected one-valver and a special Reinartz two-valver

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Special Service Department. A Testing room, fully equipped with all necessary instruments, and a staff of experts have been organised to provide readers with a Question and Answer service of the highest possible efficiency

The Wireless Magazine

March Number

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Monthly

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215 345 M. 310 M.

Week Beginning Sunday, March 1st.

SUNDAY, March 1st

8.5.30. Programme S.B. from London.
8.15.0.0. Service relayed from the Cathedral,
Bradford. Address by the Ven. The
BACON OF BRADFORD
S.B. from London

MONDAY, March 2nd

1.0.0.0. Religious Service by Mons.

by L. Harvey Englebert

TUESDAY, March 3rd

WOMEN'S HALF HOUR
CHILDREN'S CORNER
Relay of Service from the Cathedral
1.11.0. Programme S.B. from London.

WEDNESDAY, March 4th

8.5.30.0. Service relayed from the Cathedral,
Bradford. Address by the Ven. The
BACON OF BRADFORD
S.B. from London
1.0.0.0. Religious Service by Mons.
On My Anvil, by the Squire and
Programme S.B. from London.

THURSDAY, March 5th.

11.30-12.30. Gramophone Records
1.0.0.0. Service relayed from the Cathedral,
Bradford. Address by the Ven. The
BACON OF BRADFORD
S.B. from London
7.0-11.0. Programme S.B. from London.

FRIDAY, March 6th.

8.5.30.0. Gramophone Records
1.0.0.0. Service relayed from the Cathedral,
Bradford. Address by the Ven. The
BACON OF BRADFORD
S.B. from London
1.0.0.0. Service relayed from the Cathedral,
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BAND OF THE LEEDS RIFLES BN
THE WEST YORKSHIRE REGT
(The Prince of Wales Own)

JOHN BIRCH (Direct Sketches).

March, "The Band"
Selection, "W.H. Squire's Popular Songs"
arr. J. Ord Hume (1)

Harry Bailey
Harlequin Souderson (1)
Merry Souderson (1)

Mrs. Thirtle Souderson (1)
The Band
London, Move to the Play, "Merry"
Souderson (1)

John Bar
Group of West Riding Dialect Verses.
Harry Bailey

The Dearthless Army Souderson (1)
Merry Souderson (1)
The Band

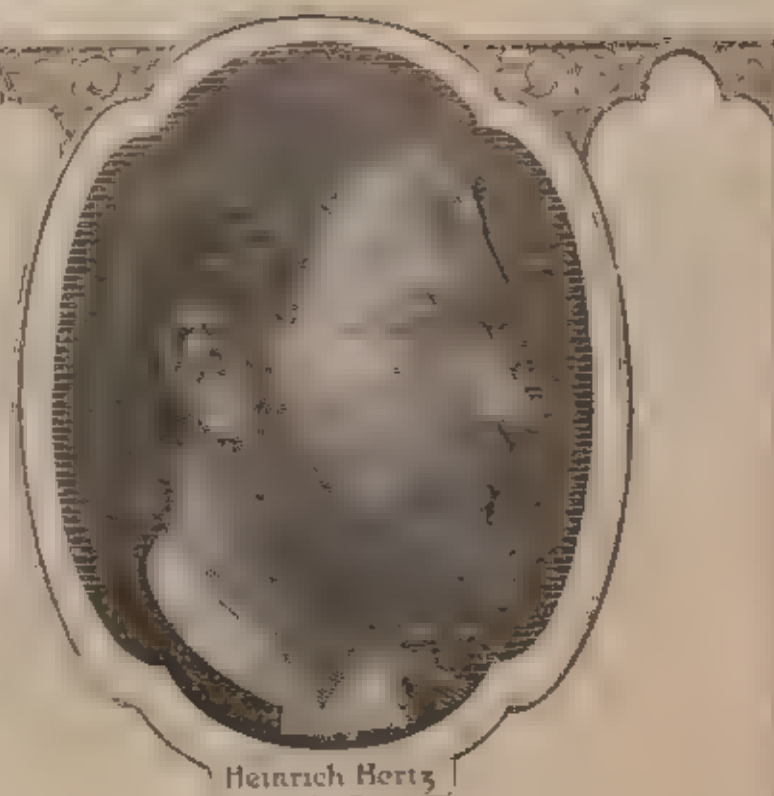
W.H. Squire's Popular Songs
Harry Bailey
Song of the Volga Boatmen
Chaloupine Rozumnyan

Requiem Souderson (1)
The Band
A Dream Picture, "The Phantom Brigade"
Souderson (1)

"Quiet Echoes" Souderson (1)
The Band
Gramophone Records
CHILDREN'S CORNER

SATURDAY, March 7th.

8.5.30.0. Gramophone Records
1.0.0.0. Service relayed from the Cathedral,
Bradford. Address by the Ven. The
BACON OF BRADFORD
S.B. from London
7.0-12.0. Programme S.B. from London.



Heinrich Hertz

The real discoverer of Wireless waves.

IT is a sad commentary of human nature that a man has to die before he can become famous.

It is no exception to find, therefore, that some of the most brilliant of scientists have died with their life work unrecognized except among their most intimate fellow workers. Such a man was Heinrich Hertz, who, with Clerk Maxwell, as far back as 1882, discovered that wireless waves could be transmitted through space.

And so it will be with the next generation. The extraordinary developments in valve design, from the first simple two-electrode valve, which really demonstrated the practicability of valve reception, to the three-electrode valve of Lee de Forest have, more or less, been accepted as a matter of course. In fifty years' time, however, when television is general, a grateful world will look back upon those manufacturers that are spending thousands of pounds in unceasing efforts to produce better and better valves.

And so small share of praise will be due to the designers of the wonderful new Cossor Wuncell—

the Dull Emitter that definitely spells a new era for the broadcast listener. Here is a valve which definitely for the first time carries all the advantages of the standard Bright Emitter. In volume, sensitivity, freedom from distortion and microphonic noises, the Wuncell sets an entirely new standard of excellence. While for economy of current consumption and length of life this 2-volt Valve is in a class by itself. At 18/- it is the cheapest British Dull Emitter Valve you can buy. You are sure to want to know more about it, so ask your Dealer for a free copy of our large Illustrated Wuncell Folder, or send us a postcard.

All Cossor Valves are
now reduced in price.

Cossor Valves

The
World's
Greatest
radio
Crystal

NEUTRON

THE "NEUTRON" Crystal was introduced to fill the need for a really good wireless crystal. It is the outcome of diligent experiment and research, and owes its origin to the concerted efforts of a Chemist, a Metallurgist and an Electrical Engineer. The "NEUTRON" Crystal is produced on thoroughly scientific lines. It consists, essentially, of a definite aggregation of certain metallic compounds which bestow upon "NEUTRON" a high degree of both chemical and physical stability—in addition to its superlative quality as a rectifier.

The "NEUTRON" Crystal is, by virtue of its merits, "THE WORLD'S GREATEST RADIO CRYSTAL."

The abundance of unsolicited testimonials received from satisfied users since its inception bears testimony to this claim, and thoroughly justifies the confidence placed in it.

Testimony.

Frankfort-on-Maine, Germany.
I bought one of your Crystals here on Saturday last and would like to tell you of my results. Frankfort o/M one and a half miles off, on the Loud Speaker Radio-Park and 5XX loud on one pair of phones, and still easily readable on five pairs. Sunday morning I got the concert from Koenigs-Wusterhausen on 2800 m. and the concert 2-3 W.E. time, Radio-Paris. Monday, evening I turned a hour or more, 5XX, Radio-Paris, some other stations which I did not want to identify and finally I got Aberdeen perfectly clear.

I think for pure crystal reception without any amplification this is nearly a record. The distance being over 1200 Km. 5XX and Radio-Paris, I can tune in while Frankfort is transmitting (with a wave catcher).

With hearty congratulations on the excellence of your fabric." H. H. M.

"As a purchaser of one of your Neutron Crystals I have to congratulate you on the wonderful results I have obtained. Being a user of a four-valve set, I occasionally use a Crystal while my battery is being charged and on trying a Neutron Crystal the results I obtained were marvellous, being able to receive Brussels (S. B. R.) and Radiola (S. F. R.) quite clear and distinct, and many other Continental stations which I have not been able to identify, using Brown's A Type phones. Congratulating you on your wonderful discovery." R. J. T.

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Insist on NEUTRON in the Black and Yellow Tin or send us 1/- and this wonderful crystal will be mailed by return, post free.

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144 Theobalds Road, London, W.C.1. Phone: Museum 684.

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Crystal
with
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Power

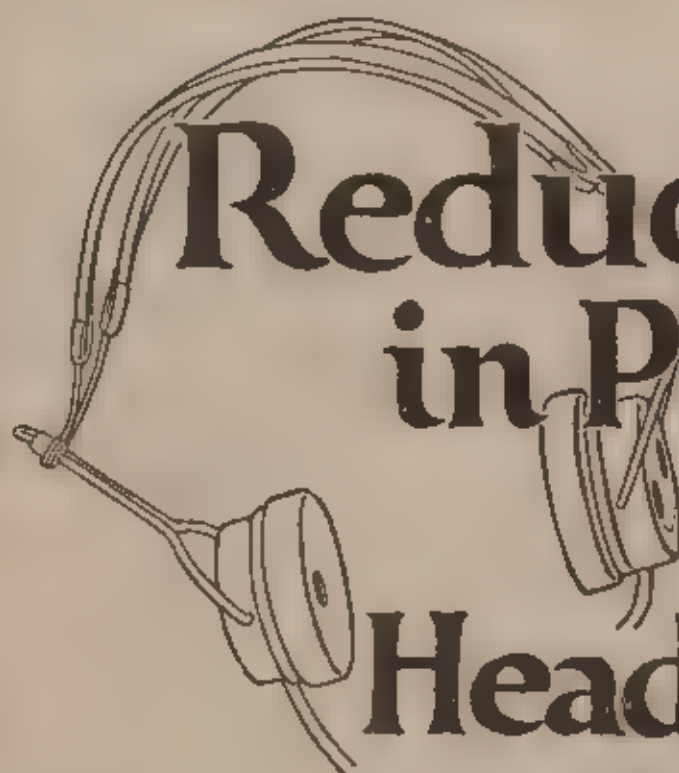


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Radiola Receivers.

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No harrowing pressure.
No "acoustic" movement of headbands.
Can be adjusted to suit individual ear and
the magnitude of use.
No wear or tear to the ear.
The sound magnification is permanent.*



"A cute aid to Acute hearing"

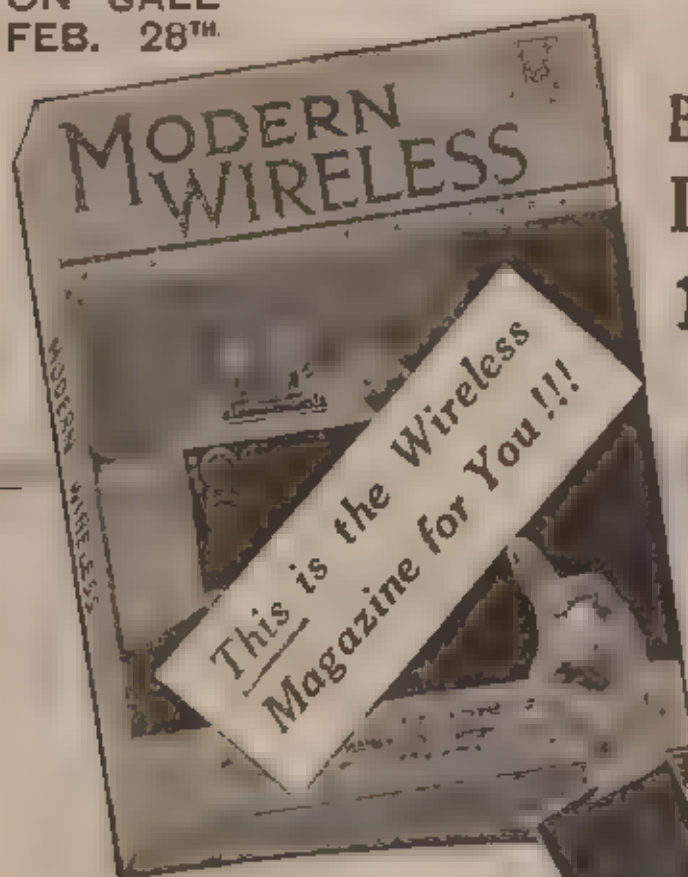
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Two very fine articles of 3-Valve Receivers are contributed by the Editor, John Scott Taggart, F.Inst.P., A.M.I.E.E., and by Percy W Harris, Member I.R.E., while a Free Blueprint and full instructions for the building of the set described by Mr. Harris is included in every copy.

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There are many other articles of interest, including POSTBAG PUZZLES, which ARTHUR R. BARRYMORE, Director of Programmes of the British Broadcasting Company, has solved and describes with a very human and humorous touch which he has written for this Special Double Number.

CAPT. H. J. ROUND, the famous expert of the Matconi Company, and co-inventor of the Syke Round Microphone used so extensively in the world of broadcasting stations, has written a special article on Choke and Transformer Amplifiers - this will be greatly appreciated by the more advanced section of our readers.

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years' reputa-
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ALL the
Time."



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The D.P.U. is the latest advance made in Radio manufacture, and the fact that behind it is the thirty years' reputation of Edison Bell will assure listeners-in that they can expect something just as perfect as perfection can be.

The Edison Bell Double Purpose Unit, as its name indicates, has the twin aim of serving as (1) a Valve Detector and (2) Dual Amplifier—and the interested experimenter will find even other ways of utilising this new instrument.

The D.P.U., which is the result of long and patient research, must not be confounded with the many Straight Single Valve Sets now on the market. It is far superior to any of these where volume, range, and clarity of tone are concerned.

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7.30-8.00 I am a ... S.B. from London
8.15-8.30 ... relayed from St. Paul's, ...
8.40-9.00.—Programme S.B. from London.

MONDAY, March 2nd, to THURSDAY, March 5th

11.20.—Gramophone Records.
1.00.—Tune ... relayed from the Cathedral
1.15-1.30.—Gramophone Records.
1.45-2.00.—
2.15-2.30.—WOMEN'S CORNER
2.45-3.00.—CHILDREN'S CORNER
3.15-3.30.—... Talk (Monday).
3.45-4.00.—Programme S.B. from London

FRIDAY, March 6th.

11.30-12.30.—Gramophone Records.
1.00.—Tune ... relayed from the Cathedral
1.15-1.30.—I am a ... S.B. from Birmingham
1.45-2.00.—WOMEN'S CORNER
2.15-2.30.—CHILDREN'S CORNER
2.45-3.00.—Mr W. F.L.S.,
Wonderland Nature Talks—(9), The
Sallow's Golden Bloom.
3.15-3.30.—Programme S.B. from London.
3.45-4.00.—HIS AIR GOOD ACRE (Contralto).
4.15-4.30.—L.A. BLAIR. ...
STANLEY JEPSON. ...
HAROLD JULY. (Tenor).
MARION WEBSTER (Solo Violon).
STANLEY JEPSON.

7.30.—
"Leah's Song" ("The Prodigal Son")
Debutant

Marion Webster
Dallet Music from "Rosamunde"

Prelude and Allegro
L. ...

"Fair House of Joy" ... R. Quilter (1)
Sheffield Song ...

"Dream Once Again" ... H. ...

"The Nightingale" ... B. ...

Stanley Jepson and His Band
Nightingale ...

Nightingale ... H. T. ...

"The ... of ..."
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SATURDAY, March 7th.

7.30.—Programme S.B. from Manchester
8.15.—WOMEN'S CORNER
8.45.—CHILDREN'S CORNER
9.15.—Programme S.B. from London



Increased volume without distortion

MULLARD D.F.A. VALVES
give increased volume and clarity
from your loud speaker.

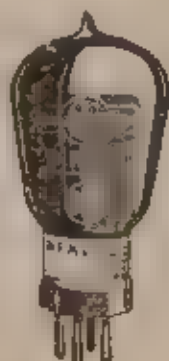
Just take out your last L.F. stage
valve, and insert a Mullard D.F.A.
You will be delighted with the im-
mediate increase in pure volume.

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Mullard D.F.A. Master Valves
consume LESS current than your
present valves, giving longer life to
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A.J.S.

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THE A.J.S. "UNITOP" CABINET RECEIVER

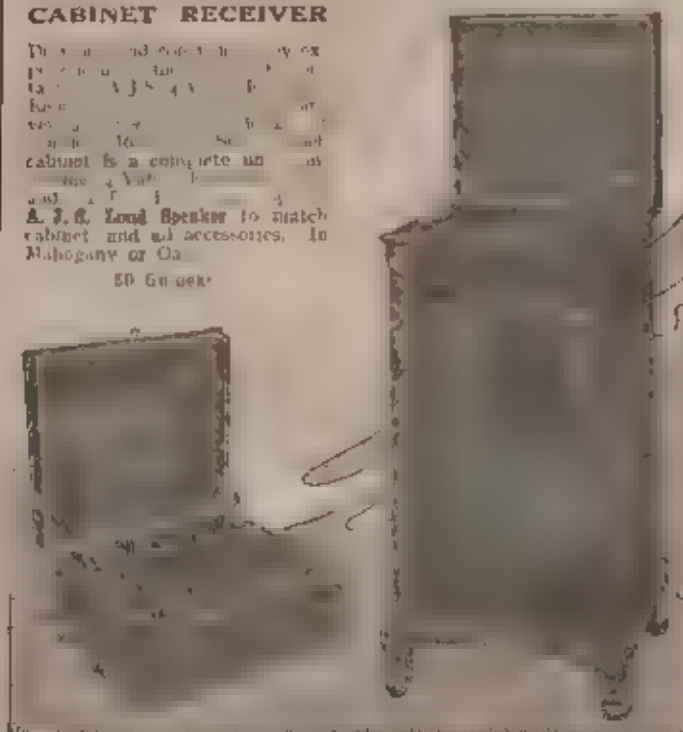
forms top section of "Unit System" Cabinet and contains A.J.S. 4-Valve Set. Complete in itself, it converts into a beautiful pedestal receiver by subsequent purchase of the A.J.S. Loud Speaker. The "Unitop" is a compact and attractive piece of furniture and a highly efficient receiver, easily portable for two functions. In Mahogany, Light, Dark, or Wax-painted. Complete with all accessories, set at 80 Guineas. Without accessories, 62/-. 1/-.

THE A.J.S. PEDESTAL CABINET RECEIVER

forms a complete unit and contains A.J.S. 4-Valve Set. The cabinet is a complete unit and is a highly efficient receiver. In Mahogany or Oak. Complete with all accessories, set at 80 Guineas. Without accessories, 62/-. 1/-.

The special A.J.S. Volt Motor let into the face of every A.J.S. panel is just one of several exclusive A.J.S. features that a personal inspection of our Wireless Instruments will reveal.

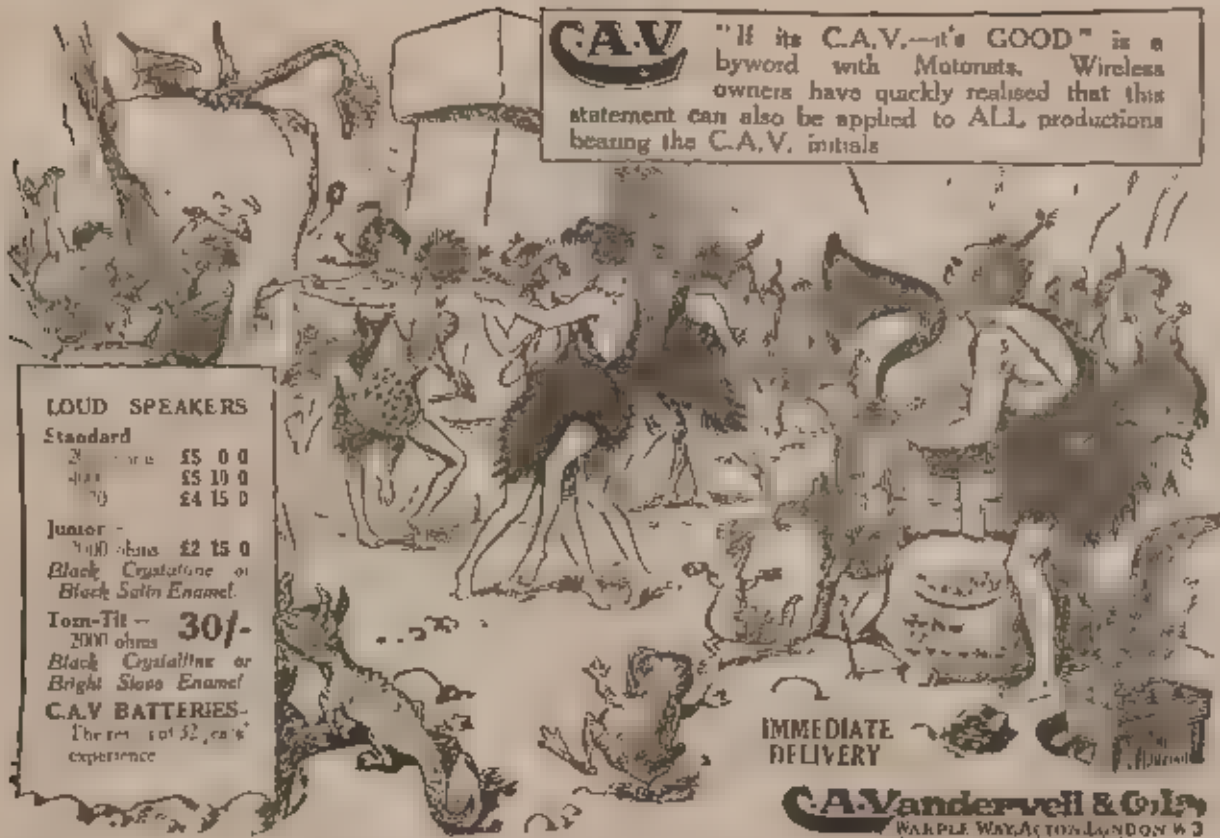
Ask your Dealer to show you the full A.J.S. range, including the "Unit System" Cabinet, the 2, 3 and 4-Valve Standard "Desk Type" Receivers, and the A.J.S. Loud Speakers. There are also A.J.S. Component parts. Illustrated Catalogue sent on request.



A. J. STEVENS & CO. (1914), LTD.
WIRELESS BRANCH, — WOLVERHAMPTON

London Office, Show and Demonstration Rooms

122-124, CHARING CROSS ROAD, W.C.2.



C.A.V. "If it's C.A.V.—it's GOOD" is a byword with Motorists. Wireless owners have quickly realised that this statement can also be applied to ALL productions bearing the C.A.V. initials

LOUD SPEAKERS

Standard	
2" x 10"	£5 0 0
4" x 10"	£5 10 0
7"	£4 15 0
Junior	
4" x 10"	£2 15 0
Black Crystalline or Black Satin Enamel	
Tom-Tit	30/-
2000 ohms	
Black Crystalline or Bright Gloss Enamel	
C.A.V. BATTERIES	
The most reliable experience	

IMMEDIATE DELIVERY

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MARPLE WAKELTON LONDON W3
Sole Importers of the N.A.B. Ltd.

B.T.H. TUNGAR
FOR CHARGING BATTERIES ON ALTERNATING CURRENT SUPPLY

THE TUNGAR solves the battery-charging problem for all whose houses are electrically lighted by alternating current.

It is connected on one side to any lamp-circuit or wa-plug and on the other to the battery. It starts charging as soon as it is switched on. There are no chemical or mechanical complications, its construction is purely electrical and there is nothing to get out of order. It is used in a clean and can be left on all night.

The Tungar is a simple and efficient device for charging batteries on alternating current supply. It is a purely electrical device and there is nothing to get out of order. It is used in a clean and can be left on all night.

Enquire at your local dealer or write for copy of new folder to:
The British Thomson-Houston Co. Ltd.,
Aix-la-Petite, Newmarket Street, Oxford

Charge your accumulator at home



Edinburgh Programme.

(Continued from page 149)

WEDNESDAY, March 4th

7.15-8.00—The 5th on 10.
8.15-8.30—Mr. J. C. SMITH
H.E., M.A. "Great Stories of the
Children's Corner"
Programme S.B. from London
10.10-10.15—Mr. J. S. CHISHOLM on F

Local News

10.30-10.35—Programme S.B. from London
10.35-10.40—"THE ROMANTIC REVELATION"
from the Theatre of the Day

THURSDAY, March 5th.

10.30-10.35—Gramophone R.
10.40-10.45—The Station House
10.45-10.50—CHILDREN'S CORNER
Programme S.B. from London

FRIDAY, March 6th.

10.30-10.35—The Station House
10.40-10.45—Mr. JAMES PATTERSON
R.S.A., R.W.S., P.R.W. on
10.45-10.50—Programme S.B. from London

SATURDAY, March 7th

10.40-10.45—The Station House
10.45-10.50—CHILDREN'S CORNER
Programme S.B. from London

Nottingham Programme.

(Continued from page 149)

April Gower

10.30-10.35—A Lattice
10.40-10.45—Mr. J. C. SMITH
10.45-10.50—Programme S.B. from London

10.30-10.35—Main Voice Unit

10.40-10.45—"Strike, Strike the Lyre"
10.45-10.50—A Lattice
Programme S.B. from London

10.30-10.35—Joseph Stanley Wagstaff

10.40-10.45—Nocturne in C Minor, Op. 48
10.45-10.50—Promises Nos. 3, 11, and 16
Programme S.B. from London

10.30-10.35—Joseph Stanley Wagstaff

10.40-10.45—"The Joy of Life"
10.45-10.50—Programme S.B. from London

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10.30-10.35—Joseph Stanley Wagstaff

10.40-10.45—"The Joy of Life"
10.45-10.50—Programme S.B. from London

Plymouth Programme.

(Continued from page 149)

10.30-10.35—Gramophone R.
10.40-10.45—The Station House
10.45-10.50—CHILDREN'S CORNER
Programme S.B. from London

Local News

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from the Theatre of the Day

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Programme S.B. from London

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10.40-10.45—Mr. JAMES PATTERSON
R.S.A., R.W.S., P.R.W. on
10.45-10.50—Programme S.B. from London

SATURDAY, March 7th

10.40-10.45—The Station House
10.45-10.50—CHILDREN'S CORNER
Programme S.B. from London

Swansea Programme.

(Continued from page 149)

10.30-10.35—Gramophone R.
10.40-10.45—The Station House
10.45-10.50—CHILDREN'S CORNER
Programme S.B. from London

Local News

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10.40-10.45—The Station House
10.45-10.50—CHILDREN'S CORNER
Programme S.B. from London

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in your own home!

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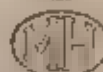
ULINKIN STANDARD 42/-

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seen the
M. H. film
showing at
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Cinemas?

THE LONDON HOME



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We have Sets
which Receive
all British and
Continental
Broadcast
Stations, and
all Compon-
ents Required
for Home-Con-
structed Sets.

Call or write
stating your re-
quirements. Full
details will be
sent you.

L. M. MICHAEL LTD

Manufacturers of Wireless and Scientific
Apparatus.

Radio Corner, 179, Strand, London, W.C.2

BRINGING UP THE ROYAL BABIES.

At Home With Princess Mary:
An Exclusive Description of
Life in the Royal Nursery, by
a Lady attached to the Court.

SEE
"TIT-BITS"

On Sale To-Morrow (Saturday)—2d.

More about High Tension Batteries

By Frank Phillips, M.I.R.E., A.M.I.E.E., Chief Engineer of Burndept Ltd.

IN the early autumn of last year, I was privileged to introduce to the public, a new high tension battery which I called the Burndept Super Radio Battery. I then said that High Tension Batteries gave more trouble in our sets than any other component, the reason being that the cells inside the average H.T. Battery were too small for present-day needs; most were designed during the war when light weight was more important than long life, and are not suitable for modern three- or four-valve broadcast sets, which are often used regularly for four or five hours a day. I made up my mind that my Company should sell one kind of H.T. Battery only, and that it must be so large and so well made that it would last for six months or so

Well, it seems that I was right; not only was the demand for the Burndept Super Radio Battery so unprecedented that we were unable to provide sufficient supplies, but others have done me the honour to follow my lead in providing large cell batteries! However, the Burndept Super Radio Battery was first in the field, and it will not be left behind: I will be quite frank in admitting that a small percentage of the batteries did not last as long as I had hoped, due partly to new types of valves drawing heavier currents from the battery than I had expected, and partly to the enormous demand occasioning slight defects in perhaps a single cell, thus spoiling a whole battery.

Various improvements are now being made, all of which lead to the production of a still better battery, having a still longer life. For instance, the zinc containers of each cell used to be made with a soldered seam, and a soldered bottom; solder and zinc set up local action in the cell and so all joints were covered with ozokerite; that was excellent but it reduced the area of zinc so we have arranged to use seamless drawn zinc containers which should add another 25 per cent. or 30 per cent. to the life of the battery. Further, pin holes will be impossible and so each cell will remain completely water-tight and thus obviate internal leakage.

The Super Radio Battery is now so well-known that only a short description is necessary. The case is of very stout

and strong composition covered with special polished mahogany finished coating, with a lid to match. The weight is 12½ lbs. and over all size 9½ x 9½ x 3½ inches, and there is no external printing or marking. On removing the lid, the top of the battery is seen to be covered with a new hard insulating compound, dull red in appearance, perfectly smooth, practically unbreakable. Rising from this surface are five very strong brass contacts which are clearly marked - and 20, 45, 48, and 50 volts. The battery is intended to be used normally to give 45 volts, which is the proper operating voltage for all High Frequency and Detector Valves of the popular dull emitter type; it is intended that, as the battery ages and the voltage drops, it may be kept up to the full 45 volts by moving the connection successively to the 48 and 50 volt positions, in this way the battery will retain its full rated voltage of 45 volts until the very end of its life. When higher voltages are required for Power Valves, two or more batteries should be joined in series.

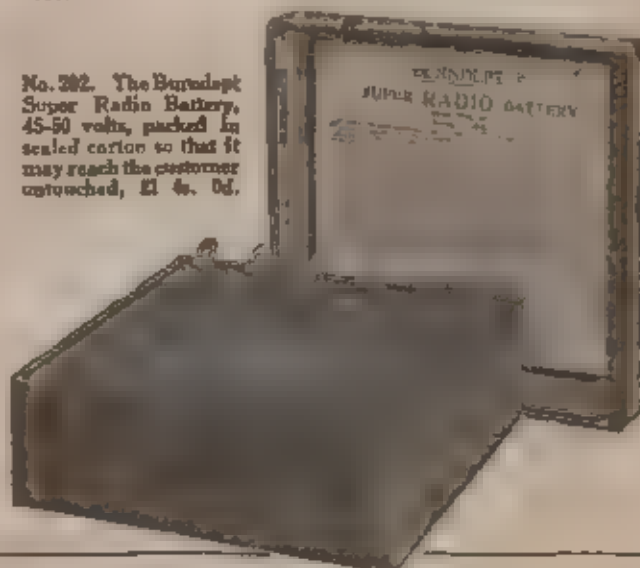
On account of the improvements made and the experience we have gained, it is safe to say that the Burndept Super Radio Battery

will operate a four-valve set four hours a day for a good six months,

provided proper grid bias is used on the power valves; the estimate is quite conservative and should be largely exceeded, especially with smaller sets

Supplies are now ample and orders can be executed from stock

No. 302. The Burndept Super Radio Battery, 45-50 volts, packed in sealed carton so that it may reach the customer untouched, £1 4s. 0d.



Purchase Burndept by its name - substitutes are not the same.

LEEDS 12, Basinghall Street (near City Square).

CARLISLE 67, Queen Street

NORTHAMPTON 10, The Drapery

BURNDEPT

BURNDEPT LTD., Aldins House, Bedford Street, Strand, London, W.C.2.

Telephone: Gower 2000
Telegrams: Burndept Ltd.
Cable: Burndept Ltd.



THE ALL-BRITAIN SET.

A wonderfully popular valve set, which, as its name implies, is capable of receiving all the main B.B.C. stations at good strength. A very simple set to operate, and renowned as being very selective. Uses the new tri-valve circuit.



THE PURIFLEX SET.

Originally designed for "Modern Wireless" by Mr. Percy Harris. Uses a Crystal Reflex circuit with a two-stage of resistance coupled low-frequency amplification. Famed for its remarkable loud-speaker purity of reproduction. There is a complete absence of distortion with the Set.



THE ALL-CONCERT-DE-LUXE.

A most handsome Receiver with all fittings supplied nickel-plated. Simple switches enable note magnifier valve being cut out if not required. Has a telephone range of 500 to 1,500 miles under normal conditions. All battery connections at rear, and plugs and jacks for telephone and loud-speaker fitted to panel.



"MODERN WIRELESS" WAVEMETER.

Every Wireless enthusiast needs a wavemeter. It tells him the wavelength of the station he is receiving. On the other hand, should he want to receive a station working on a known wavelength he can easily tune his set to that wavelength by means of the wavemeter. Price complete with battery and Silverbrook Shunt fully calibrated ready for use. In mahogany or oak cabinet £5 11 6.

**Build your own set
—and save pounds!**



THE ANGLO-AMERICAN SIX.

"The Wireless Constructor" latest Set embodying three stages of pentode high-frequency. Gives practically the power of a super heterodyne with a great saving in valves. A few feet of wire around the picture moulding of a room is all that is necessary to operate this set.

Amateur-built Receivers that any Expert would be proud to own.

If you can use a pair of pliers to cut a length of wire—if you can screw a transformer to a ready-drilled panel—if you can follow a simple wiring diagram, then you can build any of the splendid Sets illustrated on this page. From the 2-valve Resistoflex to the 6-valve Anglo-American designed by Mr. Percy Harris for "The Wireless Constructor," they represent all that is best and most original in British Radio design to-day. Every one of these Pilot Receivers carries our full guarantee that if made according to our working instructions they will work perfectly. Indeed, we go further than that

—we have instituted a special Service Department to ferret out faults for you at a nominal cost should the Set not work when you have made it up.

Choose the best Set you can afford from the chart herewith—if you have some of the parts already, we shall be pleased to supply you with the balance. If you have all the parts already, we shall be equally pleased to supply you with only the panel or the cabinet. If you cannot make up your mind which Set you will build, write for a copy of our 32-page Pilot Chart (post free 3d.), containing upwards of 30 illustrations of Pilot Receivers with the fullest details.

This abridged Chart will aid you in your choice.

Name of Receiver	No. of Valves	Price in Pounds Set and Cabinet	Set of Components	Set Cabinet with baseboard
All Cases Oak (40)		£ L. S. d.	£ L. S. d.	£ L. S. d.
S.T. 100	2	15 0	4 15 0	17 0
Puriflex	2	15 0	4 14 0	16 0
All Britain	2	15 0	4 10 0	17 0
4 Valve Puriflex	4	27 0	5 10 0	17 0
Transatlantic V.	5	48 0	6 8 0	17 0
Anglo-American 6	6	1 8 0	6 8 0	3 1 0
Transatlantic 1	4	16 0	6 13 0	1 7 0
2 Valve Resistoflex	2	12 0	4 0 0	1 13 0
(Valve panel)				
2 Valve Resistoflex	2	11 0	4 2 0	(No baseboard panel)
(Cabinet panel)				
S.T. 4 Valve Set	4	1 0 0	5 15 0	1 0 0
Harris Receiver	2	4 0	1 8 0	12 0
2 Valve Puriflex	2	17 0	5 5 0	15 0
Simplest Receiver	2	12 0	3 10 0	10 0
2 Valve S.T. 100 Receiver	2	17 0	7 10 0	1 12 0

SPECIAL NOTE: When all components and panel are purchased together a Marconi Kynar of 12/- 6d. per valve holder must be paid.



THE S.T. 100.

The world's Standard 2-valve Radio which gives probably the loudest signals it is possible to obtain with two valves. Tens of thousands of S.T. 100 Receivers have been built in America, although the circuit was first evolved by Mr. John Scott-Taggart (Editor of "Modern Wireless"). This Set is contained in a handsome oak double drop front, and possesses a most attractive appearance.

To get the full list of parts necessary for 30 different Receivers, send 3d. to-day for the Pilot's Chart—

If the 2 different Sets shown here are not suitable for you send 3d. at once for a copy of our 32-page Booklet giving illustrations of 30 different Receivers—ranging from simple Crystal to elaborate multi-valve Sets. A full detailed list of every component required for each Receiver. An invaluable little Booklet for the Home Constructor. In addition, we also have a 15-page fully illustrated catalogue (the most complete in the trade) of Wireless Components, post free 3d.; and also Percy Scott's Wireless Book, post free 6d., containing more than 50 Circuit diagrams.



THE TRANSATLANTIC V. RECEIVER.

The first standard Set to use two stages of high-frequency amplification. A real long-distance Set. Will work particularly well on a simple little indoor aerial. Regular reception of American broadcasting and long-distance Continental stations at loud-speaker strength is an easy matter with this 5-valve Set.

PETO-SCOTT Co., Ltd., 77, CITY RD., LONDON, E.C.1.

Registered Office, Mail Order & Showroom:
Branches: LONDON—62, High Holborn, W.C.1. PLYMOUTH—4, Bank of England Place.
LIVERPOOL—4, Manchester St. CARDIFF—94, Queen St. WALTHAMSTOW—23D, Wood St.

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G.W.I. VALVE RENEWALS.

THE FIRST OFFERED—NEARLY 3 YEARS AGO.

Our credentials, and your satisfaction, proved by increasing demand making our necessity for increased production.

OUR EXTENSIVE ADDITIONAL VALVE MAKING PLANT—which includes the latest type appliances—IS NOW IN PRODUCTION.

Most comprehensive service and prompt delivery now assured.

ALMOST ANY TYPE VALVE CAN NOW BE SATISFACTORILY RENEWED.

BRIGHT EMITTERS RENEWED TO .25 AMP.

STANDARD TYPES, Bright Emitters .. from 6/6 each

DULL EMITTERS, .25 Amp. 10/6 .. Carriage

WE CO VALVES 12/6 .. Paid.

POWER VALVES 15/- ..

GUARANTEED TONE AND POWER PERFECT.

Terms cash with order. Delivery 1 to 7 days according to type.

G.W.I. LTD.

THE PIONEER VALVE RENEWAL SPECIALISTS.

43, Grafton Street, Tottenham Court Road, London, W.1.

Agents now wanted everywhere. Good terms, guaranteed deliveries.

BEGINNER'S GUIDE TO WIRELESS

This 168 page book explains everything you wish to know about Wireless, and enables any beginner to make Wireless Sets which are unequalled in price, quality or efficiency.

Exact cost of each set clearly stated.

FULL INSTRUCTIONS WITH 28 DIAGRAMS

FOR MAKING SUPER EFFICIENT CRYSTAL SETS, SINGLE VALVE SETS, ONE AND TWO VALVE AMPLIFIERS, DUAL AMPLIFICATION SETS, ALSO THE LATEST IMPROVED TYPES OF TWO, THREE AND FOUR VALVE TUNED ANODE RECEIVERS.

Soldering or special tools not required.

IF YOU ALREADY HAVE A WIRELESS SET, GET THIS BOOK AND MAKE A BETTER ONE.

Satisfaction guaranteed or money returned.

SAXON RADIO CO. (DEPT. 24), SOUTH SHORE, BLACKPOOL.

1/3 POST FREE

"CHASEWAY" BRITISH MADE HOME BATTERY CHARGERS FOR DIRECT AND ALTERNATING CURRENTS.

"CHASEWAY" products are BRITISH which in itself is a tribute—they are made by us in our own works by skilled craftsmen—and they are above all PRACTICAL—and in price they are distinctly competitive.

For Chaseway D.C. Charger ask your Dealer. For Chaseway A.C. Charger write for further details.

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CHASE ELECTRICAL Mfg. Co., Ltd.,
184, Fleet Street, LONDON, E.C.4.

Phone: Central 1539.

Send stamp for full details and illustrated CATALOGUE of CHASEWAY NOVEL NECESSITIES.

BRITISH MADE VALVES for 6/6

RAF. Valves by Concor Co. 6/6, the finest H.F. and Det. Valve ever offered under 13/-, 4-pin "C.R." type 8/6, Marconi "Round N" Valves 10/6. Valves most made under Government supervision. There is no valve to touch them under double the price. Sent by post at buyer's risk. 3-valve R.A.F. Receivers with Valves 27 post free. 3-valve Set 23 15/-, Valves extra. Loud Speakers 12/-, Milliamperes from 20/-, Receivers 28/-, Alternators 70/-, Wavemeters 23/-, Transmitters 15/- to 25 10/-, Instruments of all types. £10,000 Stock of Apparatus, Discount.

Call and inspect or send 1d. Stamp for 32-page Illustrated Catalogue of Radio Equipment.

LESLIE DIXON & CO., 8, Colonial Avenue, Minster, London, E.1.

Valves Repaired Promptly & Perfectly

FREE Booklet.

LET us send you this useful Booklet. Gives curves of Radios Valves, prices for repair work, and shows what service your accumulator should give.

RADIONS LTD., BOLLINGTON, Nr. MACCLESFIELD.

Bright Emitters ... 6/6
Dull Emitters
2 volt type 9/-
.06 type 10/6

CYMO SITE

2/6

IS every one of you who are weary of getting crystals that have been previously tested for performance. So you who were known to get a good Cymosite Crystal. From all Dealers or direct from North Eastern Instrument Co., Durham Road, Low Fell, Gateshead-on-Tyne.



Fit a 'Malone' TO YOUR PHONE

and you get results rivaling a 50/- LOUD SPEAKER

FOR ONLY 7/6 Postage 1/-

Fitted in a second, sound British made, complete, strongly packed. Send P.O. 8/6 at once and listen in comfort. Send stamp for free descriptive pamphlet. Write direct to Works.

MALONE & CO., LEIGH-ON-SEA, ESSEX.

A.J.S. WIRELESS HANDBOOK

Primarily intended to serve as a Guide to the A.J.S. Wireless Receivers, the second edition (revised) of this 42-page handbook contains some very useful illustrations and information for users of wireless in general.

Copies (Post Free) 6d each

Obtainable from
A. J. STEVENS & CO. (1914), LTD.,
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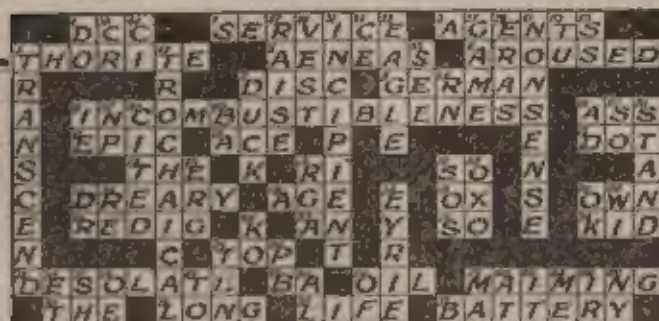
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